Appendix A: Stakeholder Surveys

If you would like to see specific survey results, please contact Joann Mitchell, Public Involvement Coordinator, at JoannMitchell@KinneyEng.com.

AMATS: Glenn Highway Integrated Corridor Management Study (Airport Heights Dr to Knik River Bridge)

General Information

The Alaska Department of Transportation and Public Facilities (DOT&PF), in cooperation with the Federal Highway Administration (FHWA), is preparing the Integrated Corridor Management (ICM) Study. The ICM Study aims to identify methods to improve the efficiency of the movement of people and goods along the corridor, specifically as it relates to non-recurring congestion. These measures are intended to increase reliability and predictability of travel through the corridor.

Information from this survey will be used as a part of the ICM Study.

* 1. What agency/group are you with?

* 2. Please enter your contact information:

Name

Email Address

3. Additional contact information:

Company

Address

Address 2

City/Town

State/Province

ZIP/Postal Code

Country

Phone Number

Overview

All questions in this survey are focused on the Glenn Highway corridor from Airport Heights Dr to the Knik River Bridge. Please help us better understand how traffic incidents in this corridor influence your agency.

Questions included in this survey relate to:

- **An agency's response to help mitigate/resolve traffic incidents.**
- **Adjustments agencies make to normal operations due to traffic incidents.**
- **Coordination between agencies.**

4. Does a traffic incident (such as a crash, construction, weather, etc.) on the Glenn Highway initiate a response or adjustment to normal operations for your agency?

- ◯ Yes
- ◯ No

If "No", please skip to Question #78 on Page 35.

Incident Response

5. Does your agency **respond to help mitigate/resolve** an incident (such as a crash, construction, weather, etc.) on the Glenn Highway?

- ◯ Yes
- ◯ No

If "No", please skip to Question #43 on Page 22.

Crash Incident Response

6. Does your agency respond to help mitigate/resolve issues when a **CRASH** occurs on the Glenn Highway?

- ◯ Yes
- ◯ No

If "No", please skip to Question #14 on Page 8.

Crash Incident Response

7. What is your agency's response to mitigate/resolve a **CRASH** incident?

8. Does your agency adjust traffic flow due to **CRASHES**?

- [ ] No
- [ ] Lane Closures
- [ ] Signal Timing
- [ ] Road Closures
- [ ] Other

Additional information regarding adjustments to traffic flow:

9. Does your agency alert the public of a **CRASH** incident? How?

- [ ] No
- [ ] Website
- [ ] Facebook
- [ ] Twitter
- [ ] Other Online Methods
- [ ] Radio
- [ ] News Outlets
- [ ] Traffic Control Devices
- [ ] Other Onsite Methods
- [ ] Other

Please elaborate:

10. Does your agency implement other measures for your **CRASH** response?

- ( ) No
- ( ) Yes. Please explain:

11. Does your agency alert or coordinate with other agencies for a **CRASH** incident?

- ( ) Yes
- ( ) No

If "No", please skip to Question #14 on Page 8.

Crash Incident Response - Coordination

12. What agencies do you alert/coordinate with for a **CRASH** incident?

13. How do you alert/coordinate with these agencies for a response to a **CRASH** incident?

Construction Response

14. Does your agency respond to help mitigate/resolve issues related to **CONSTRUCTION** on the Glenn Highway?

- ◯ Yes
- ◯ No

If "No", please skip to Question #23 on Page 13.

Construction Response

15. What type of **CONSTRUCTION** activities does your agency respond to?

- [ ] Pre-planned construction
- [ ] Unplanned/emergency construction
- [ ] Road maintenance type construction
- [ ] Short-term construction (<1 month)
- [ ] Long-term construction (>1 month)
- [ ] Construction in the driving lanes
- [ ] Construction on the shoulder
- [ ] Construction within the right-of-way but outside of the roadway
- [ ] Other (please specify)

16. When is your agency's response for **CONSTRUCTION** ?

- [ ] Prior to construction
- [ ] During construction
- [ ] After construction
- [ ] Other (please specify)

17. Does your agency adjust traffic flow due to **CONSTRUCTION**?

- [ ] No
- [ ] Lane Closures
- [ ] Signal Timing
- [ ] Road Closures
- [ ] Other

Additional information regarding adjustments to traffic flow:

18. Does your agency alert the public of **CONSTRUCTION**? How?

- [ ] No
- [ ] Navigator (www.alaskanavigator.com)
- [ ] Facebook
- [ ] Twitter
- [ ] Other Online Methods
- [ ] Radio
- [ ] News Outlets
- [ ] Traffic Control Devices
- [ ] Other Onsite Methods
- [ ] Other

Please elaborate:

19. Does your agency implement other measures to respond to **CONSTRUCTION**?

- ( ) No
- ( ) Yes. Please explain:

20. Does your agency alert or coordinate with other agencies for **CONSTRUCTION**?

- ◯ Yes
- ◯ No

If "No", please skip to Question #23 on Page 13.

Construction Response - Coordination

21. What agencies do you alert/coordinate with for **CONSTRUCTION**?

22. How do you alert/coordinate with these agencies for **CONSTRUCTION**?

Weather Event Response

23. Does your agency respond to help mitigate/resolve issues when a **WEATHER** event occurs on the Glenn Highway?

- ◯ Yes
- ◯ No

If "No", please skip to Question #31 on Page 17.

Weather Event Response

24. Does your agency have specific criteria under which you initiate a response to a **WEATHER** event?

- ◯ No
- ◯ Yes. Please explain:

25. What is your agency's response to mitigate/resolve a **WEATHER** event?

26. Does your agency adjust traffic flow due to **WEATHER** events?

- ☐ No
- ☐ Lane Closures
- ☐ Signal Timing
- ☐ Road Closures
- ☐ Other

Additional information regarding adjustments to traffic flow:

27. Does your agency alert the public of a **WEATHER** event? How?

- [ ] No
- [ ] Website
- [ ] Facebook
- [ ] Twitter
- [ ] Other Online Methods
- [ ] Radio
- [ ] News Outlets
- [ ] Traffic Control Devices
- [ ] Other Onsite Methods
- [ ] Other

Please elaborate:

28. Does your agency alert or coordinate with other agencies for a **WEATHER** event?

- ( ) Yes
- ( ) No

If "No", please skip to Question #31 on Page 17.

Weather Event Response - Coordination

29. What agencies do you alert/coordinate with for a **WEATHER** event?

30. How do you alert/coordinate with these agencies for a response to a **WEATHER** event?

Other Incident Response

31. Are there **OTHER** incidents (aside from crashes, construction, and weather) that your agency responds to help mitigate/resolve on the Glenn Highway?

- ◯ Yes
- ◯ No

If "No", please skip to Question #39 on Page 21.

Other Incident Response

32. What are the **OTHER** types of incidents your agency responds to?

33. What is your agency's response to mitigate/resolve these **OTHER** incident types?

34. Does your agency adjust traffic flow due to **OTHER** incidents?

- [ ] No
- [ ] Lane Closures
- [ ] Signal Timing
- [ ] Road Closures
- [ ] Other

Additional information regarding adjustments to traffic flow:

35. Does your agency alert the public of these **OTHER** incident types? How?

- [ ] No
- [ ] Website
- [ ] Facebook
- [ ] Twitter
- [ ] Other Online Methods
- [ ] Radio
- [ ] News Outlets
- [ ] Traffic Control Devices
- [ ] Other Onsite Methods
- [ ] Other

Please elaborate:

36. Does your agency alert or coordinate with other agencies for these **OTHER** incidents?

- ( ) Yes
- ( ) No

If "No", please skip to Question #39 on Page 21.

Other Incident Response - Coordination

37. What agencies do you alert/coordinate with for these **OTHER** incident types?

38. How do you alert/coordinate with these agencies for a response to **OTHER** incident types?

Response Optimization

39. What is your biggest hurdle in responding to incidents?

40. What additional measures or resources would help you in your response efforts?

41. What factors impede your response efforts?

42. What information do you wish you had to assist you in your response efforts?

Operations Adjustments - Overview

43. Does your agency **adjust normal operations** to adapt when an incident (such as a crash, construction, weather, etc.) occurs on the Glenn Highway?

- ◯ Yes
- ◯ No

If "No", please skip to Question #78 on Page 35.

Crash Operation Adjustments

44. Does your agency adjust normal operations to adapt when a **CRASH** occurs on the Glenn Highway?

- ◯ Yes
- ◯ No

If "No", please skip to Question #53 on Page 26.

Crash Operation Adjustments

45. Where does your agency get information from to initiate an adjustment to normal operations due to a **CRASH** incident?

46. For a **CRASH** incident, does your agency coordinate with other agencies to adjust normal operations?

- ◯ No
- ◯ Yes. Please describe how you coordinate and with which agencies.

47. Does your agency adjust the timing of your normal operations during a **CRASH** incident?

- ☐ No, there is no impact.
- ☐ No, the delay is accepted without modifying operations.
- ☐ Delay departure time
- ☐ Accelerate departure times
- ☐ Other (please specify)

Please explain:

48. Does your agency reroute operations during a **CRASH** incident?

- ◯ Always
- ◯ Sometimes
- ◯ Never

Please explain or list any specific routes you use:

49. Do **CRASHES** cause your agency to reallocate resources?

- [ ] No
- [ ] Yes, our agency directs resources **AWAY** from the Glenn Highway during a CRASH incident.
- [ ] Yes, our agency directs resources **TOWARDS** the Glenn Highway during a CRASH incident.
- [ ] Other

Please explain:

50. Does your agency have specific operation procedures for **CRASH** incidents?

- ◯ No, we deal with them on a case-by-case basis.
- ◯ Yes. Please explain:

51. Please describe any other ways in which your agency adjusts normal operations for **CRASH** incidents.

52. Please explain if/how **CRASH** severity impacts your answers above.

Construction Operation Adjustments

53. Does your agency adjust normal operations to adapt for **CONSTRUCTION** incidents on the Glenn Highway?

- ◯ Yes
- ◯ No

If "No", please skip to Question #61 on Page 29.

Construction Operation Adjustments

54. Where does your agency get information from to initiate an adjustment to normal operations due to **CONSTRUCTION**?

55. For **CONSTRUCTION**, does your agency coordinate with other agencies to adjust normal operations?

- ◯ No
- ◯ Yes. Please describe how and with which agencies.

56. Does your agency adjust the timing of your normal operations during **CONSTRUCTION**?

- ☐ No, there is no impact.
- ☐ No, the delay is accepted without modifying operations.
- ☐ Delay departure time.
- ☐ Accelerate departure times.
- ☐ Other (please specify)

Please explain:

57. Does your agency reroute operations during **CONSTRUCTION**?

- ◯ Always
- ◯ Sometimes
- ◯ Never

Please explain or list any specific routes you use:

58. Does **CONSTRUCTION** cause your agency to reallocate resources?

- [ ] No
- [ ] Yes, our agency directs resources **AWAY** from the Glenn Highway for a CONSTRUCTION incident.
- [ ] Yes, our agency directs resources **TOWARDS** the Glenn Highway for a CONSTRUCTION incident.
- [ ] Other

Please explain:

59. Does your agency have specific operation procedures for **CONSTRUCTION**?

- ◯ No, we deal with it on a case-by-case basis.
- ◯ Yes. Please explain:

60. Please describe any other ways in which your agency adjusts normal operations for **CONSTRUCTION**.

Weather Operation Adjustments

61. Does your agency adjust normal operations to adapt when a **WEATHER** event occurs on the Glenn Highway?

- ◯ Yes
- ◯ No

If "No", please skip to Question #69 on Page 32.

Weather Operation Adjustments

62. Where does your agency get information from to initiate an adjustment to normal operations due to a **WEATHER** event?

63. For a **WEATHER** event, does your agency coordinate with other agencies to adjust normal operations?

- ◯ No
- ◯ Yes. Please describe how and with which agencies.

64. Does your agency adjust the timing of your normal operations during a **WEATHER** event?

- ☐ No, there is no impact.
- ☐ No, the delay is accepted without modifying operations.
- ☐ Delay departure time.
- ☐ Accelerate departure times.
- ☐ Other (please specify)

Please explain:

65. Does your agency reroute operations during a **WEATHER** event?

- ◯ Always
- ◯ Sometimes
- ◯ Never

Please explain or list any specific routes you use:

66. Do **WEATHER** events cause your agency to reallocate resources?

- [ ] No
- [ ] Yes, our agency directs resources **AWAY** from the Glenn Highway during a WEATHER incident.
- [ ] Yes, our agency directs resources **TOWARDS** the Glenn Highway during a WEATHER incident.
- [ ] Other

Please explain:

67. Does your agency have specific operation procedures for **WEATHER** events?

- ◯ No, we deal with them on a case-by-case basis.
- ◯ Yes. Please explain:

68. Please describe any other ways in which your agency adjusts normal operations for **WEATHER** events.

Other Operation Adjustments

69. Are there **OTHER** incidents (aside from crashes, construction, and weather) that will cause your agency to adjust normal operations when an incident occurs on the Glenn Highway?

- ◯ Yes
- ◯ No

If "No", please skip to Question #74 on Page 34.

Other Operation Adjustments

70. What are the **OTHER** types of incidents your agency adjusts normal operations for?

71. Where does your agency get information from to initiate an adjustment to normal operations due to these **OTHER** incident types?

72. For **OTHER** incidents, does your agency coordinate with other agencies to adjust normal operations?

- ◯ No
- ◯ Yes. Please describe how and with which agencies.

73. Please describe how your agency adjusts normal operations for **OTHER** incidents.

Operations Optimization

74. What is your agency's biggest hurdle in adjusting operations due to incidents?

75. What additional measures or resources would help your agency in adjusting operations?

76. What are the factors impede your agency's operations on the Glenn Highway?

77. What information do you wish you had to assist your agency in adjusting operations?

Coordination

78. List any additional agencies you coordinate with (that you haven't included in previous answers) for the Glenn Highway corridor. Please include how you coordinate with them.

79. What works well with your coordination efforts?

80. Are there ways you see to improve coordination?

AMATS: Glenn Highway Integrated Corridor Management Study
(Airport Heights Dr to Knik River Bridge)

Follow-Up

81. Do you have information that would be helpful to our team as we complete this study (data, studies, surveys, etc)?

- ◯ No
- ◯ Yes. Please list:

82. Does your agency have any plans (short-term or long-term) that would affect or change yourresponse to mitigate/resolve incidents?

- ◯ No
- ◯ Yes. Please explain:

83. Does your agency have any plans (short-term or long-term) that would affect or change your ability to adjust operations to adapt to incidents?

- ◯ No
- ◯ Yes. Please explain:

84. ***Thank you for your participation in our survey!*** If you have any additional comments, please let us know:

Appendix B: Stakeholder Meeting Summary

KINNEY ENGINEERING, LLC

MEETING SUMMARY

Project:	AMATS: Glenn Highway Integrated Corridor Management (ICM) Study Project No. CFHWY00289/0A16052
Meeting:	Stakeholders Meeting
Date/Time:	April 17, 2018 11:00 am – 2:00 pm
Location:	MOA Permit Center, Training Room 4700 Elmore Road
Team Attendees:	Edith McKee, PE, DOT&PF Jeanne Bowie, PE, Kinney Engineering (KE) Joann Mitchell, PE, KE Heather Edic, EI, KE Kevin Miller, PE, Kapsch Imran Inamdar, Kapsch
Other Attendees:	Rick Steiding, APD Duanne Fujimoto, APD Vivian Underwood, AMATS John Miller, ASD Student Transportation Warren Ulrich, Reliant Transportation Jon Scudder, JBER Planning Kent Kohlhase, MOA PM&E Kristen Langley, MOA Traffic Carol Wong, MOA Planning Mark Roberts, State Emergency Operations Center (SEOC) David Post, DOT&PF
Meeting Materials:	• Agenda • Project fact sheet

Jeanne Bowie opened the meeting and introduced team members. Self-introductions were then made.

Kevin Miller gave an overview of Integrated Corridor Management (ICM) (*see attachment*). Following that, Imran presented an example ICM study that was done for Virginia DOT in the DC area (*see attachment*).

> Mark Roberts, AEOC, asked if Kapsch has had an ICM project comparable to the Glenn Highway, specifically a project that does not have existing alternate routes. Kevin responded that they had an I15 corridor bridge project that had no alternate routes.
>
> Vivian Underwood, AMATS, asked how towing was handled in that project corridor. Imran explained that the police have a list of different towing companies and the capabilities of each. When an incident occurs, VDOT or the police call a towing company that has the necessary equipment. In addition, tow trucks stage themselves in some areas so they can more quickly respond. Some places also use push-bumpers to quickly get disabled vehicles off the road.
>
> Kristen Langley, MOA Traffic, mentioned that in California they have dedicated incident response teams and Rick Steiding, APD, mentioned that California also has recurrent frequent patrols that clear the highway and shoulders of any disabled vehicles or debris, which helps prevent motorists from being distracted and causing further congestion.

Imran also talked about different incentivizing ideas that have been implemented. The Google campus has a program where single occupant drivers “pay” those that carpool. Imran also mentioned that in the DC area they use demand tolling (HOT lanes). It was mentioned that the Mat-Su Borough Long Range Transportation Plan (LRTP) identified some park and ride lots to be developed and that vanpooling is a popular option of public transportation for Mat Su commuters.

Jeanne then reviewed the status of the project, including a summary of the online survey results (*see attachment*). The question was raised as to whether or not the recent bridge incident skewed the results. Heather Edic, who has

been delving into the results, stated that the responses before the incident appear consistent with the answers after the event.

To better understand how incidents are handled, Jeanne led a discussion of the four stages of an incident: Detection and Verification, Response, Clearance, and Responders Safety.

DETECTION & VERIFICATION
Means by which an incident is detected:

- 911 call
  - Calls go to APD and they decide who to send out in response (APD or AFD)
    - APD always sends an officer if they get a call (although it may take a long time for an officer to reach the scene if no injuries were reported)
    - AFD will respond to an incident if there was a medical or fire emergency reported
    - APD also calls ASD to alert them
  - For incidents outside of Anchorage (Knik River and north), 911 MatCom calls the State Troopers
- ASD bus drivers witness an accident
  - ASD (John Miller) goes out to verify
  - Nixle also alerts ASD of an incident
- Officers on the road come across a crash
- Google maps, Waze or other apps
- Radio stations/Facebook/other social media

Comments:

- Traffic cameras aren't used to detect crashes (they also get overwritten every 3 days)
- No real-time reporting to DOT&PF
  - Unless a big infrastructure issue, even guardrail damage will take at least a business day to get reported
- APD can issue message on big sign (DMS)
  - Supervisor on the shift requests dispatch to issue message
    - Strict guidelines on the messages are required in accordance with the DOT&PF agreement
  - DMS was installed about 25 years ago, no one knows why that location was chosen
    - Agreement amongst the stakeholders that it isn't in the right location
- APD will do traffic control if needed for motorists to get around a crash
  - Shaman has a term contract with APD and they will do the traffic control if necessary (for lane or road closures of longer than a couple of hours)
  - APD does all incident traffic control unless there is a very large incident with infrastructure issues, then they will coordinate with multiple agencies, like DOT, to come up with detours, etc.
- Nixle Alerts: APD dispatch contacts their Public Information Officer (PIO) who then issues the alert. If after normal business hours, dispatch issues the alert
  - There are 48,000-52,000 subscribers
  - 511 gets updated when Nixle alert goes out via an automated link
  - Direct link also goes to the DOT website, apps, and Facebook
- APD has portable message boards that they can use (in a van, set up on patrol car)
- APD does not notify radio stations and APD's radios are on a secure channel (no one can listen into the scanner)

RESPONSE (actions that various agencies take after incident is verified)

- APD responds to every crash
  - If there are injuries, AFD responds (AFD will be dispatched if they know there are injuries, APD will call AFD from the scene if they determine AFD is needed)
    - Rollovers are assumed to involve injuries
    - If AFD goes out, an ambulance, truck, battalion chief, and an additional apparatus if extrication is needed are sent to the scene. If a helicopter is needed (1 every 2 to 3 months), the highway gets closed down. Fire engines are used to block traffic.
    - If medics have to respond, it is most likely that the highway will get shut down (because the road is too narrow for the emergency response vehicles to maneuver)

        - AFD follows their protocols to determine response speed
    - 3D scanners are used only in major crashes
        - Speeds things up but it's still very time consuming to collect the evidence
        - Fatalities are treated as homicides (minimum 2 hour shut down)
        - APD is working on getting a drone for mapping—this will speed up the data collection process
- DEC will be called out if there is a hazardous materials spill
- Tow trucks
    - Tow trucks are not called out during rush hour (ties up traffic too much)
    - For non-injury collisions, APD can use push bumpers to get disabled vehicles off the road quickly
- Wildlife-Vehicle Collisions
    - APD is dispatched, they call a charity to harvest the moose
        - Slows down traffic even when it is off the road
        - Trying to get charities to haul the moose away and butcher it off-site
- Commercial vehicles (including tour buses) have a different protocol and they send out their own safety officers
- DOT&PF is called only when there is damage to the infrastructure

Comments:

- Emergency turn arounds aren't designed for high speed but they can be used for emergency response vehicles. However, they also get used by drivers
- The stretch of highway between Highland Road and Muldoon is the worst (Highland Road is the worst point)
    - A frontage road between Highland and Muldoon would be a big help
- Frontage roads are in the draft Metropolitan Transportation Plan (MTP) to provide an alternate route. However, if frontage roads are used during a closure of the Glenn, the traffic then just gets moved onto the frontage road and creates problems there. When the Old Glenn is used as an alternate route during accidents the capacity gets exceeded and it backs-up.
- To use JBER requires a tremendous amount of coordination and approvals
- Traffic Operations Center (TOC) at MOA has only 3 staff members and it is not staffed 24/7. They cannot remotely access the system to adjust signal timing.
- APD would provide traffic control on side streets in rare instances
- Commuter rail could have been implemented if the bridge wouldn't have been open on the Monday after it was damaged.
- Comments were made regarding why people are unlikely to take public transportation with the current set up. Waiting for public transportation in the cold, where will commuters park their vehicles while they commute, is it secure? Sprawled out city without a lot of public transport, bus doesn't go anywhere on base and has a hard time going up hills.
- If a commercial vehicle is in the incident, the commercial company usually sends out a safety personal supervisor and an additional bus if needed (for tour bus companies).
- The question was asked if traffic signal timing should be changed when traffic is diverted onto frontage or other roads. The answer was that the technology is there, but not the resources to do so. The roads and signals may not all be under the same ownership.
- APD discusses their response to major incidents but it is not routine to discuss most incidents in terms of lessons learned and changes to protocols.

CLEARANCE (clearing vehicles out of the roadway)

- Towing
    - APD uses push bumpers when they can
    - There are 9 tow companies that they rotate through
        - Drivers can request a specific company or APD dispatch calls whoever is next on the rotation list
        - When the disabled vehicle is needed for evidence, tow companies have to respond within 45 minutes
            - Otherwise, there is no guarantee that a tow truck will be available. It can take an hour or more for one to reach the scene.

        - Most of the need for towing is during bad weather (motorists going in the ditch)
        - Many tow companies will not respond to certain calls because they don't want to be stuck with the vehicle (drivers are responsible for paying the towing fee and the tow companies don't want to risk not getting paid)
    - Imran suggested offering incentives to companies that clear an accident quickly
    - APD won't contract with many tow companies because their drivers can't pass background checks
    - Private tow companies would be helpful but not currently being used (Special Safety Patrol (SSP) vehicles used to assist disabled vehicles)
        - Probably not enough volume on the Glenn Highway for it
- APD will let Dispatch know when the incident is cleared
- HazMat issue is a big deal
- Highway has narrow shoulders which inhibits emergency vehicles' abilities to get to the scene
    - APD has to use extreme caution to reach the scene
        - Portions of the highway can be closed down so the opposite direction of travel can be used to get AFD to the scene
        - Emergency vehicles can use JBER if necessary
            - The route most likely used is not maintained
            - If it's clogged up on the highway, it's clogged up on base so not always helpful
    - Past Muldoon is where it gets most difficult to reach a scene
    - AFD and APD can dispatch from Eagle River and the Chugiak FD can also be called in

RESPONDERS SAFETY

- Police Academy only spends about 1 hour in traffic control training
- Alaska does have a "move over" law but enforcing it is a low priority because of lack of resources
    - AMATS could help with a campaign to educate the public
- Three to four officers have been struck outside their vehicle in the last 20 years. It is more common to hit an officer in their vehicle.
- Safety is a bigger issue during construction, lots of cars come speeding through the construction zone. APD mentioned there are only about six officers in the traffic department which includes Glenn and Seward Highway traffic patrolling.
- Speed signs with built in radar are effective but only good for two lane roads.

Each stakeholder was then asked about their **goals**—what do they hope this project will accomplish?

DOT&PF (Edith McKee)

- identify needed infrastructure
    - there are a lot of crashes in one area we can look at the cost benefit of adding additional infrastructure
    - What alternatives do we have right now if an accident occurs in certain locations, identify areas that have no viable infrastructure alternatives already set in place
- identify incentives for mass transit—what would it take to get more people on the bus, train, van pool, etc?

MOA Planning

- better construction coordination (and special events)
- more/better post incident debriefs, where was there too much overlap, identify gaps
- Need transit coordination

ASD Transportation

- Better communication of construction. Having one place that shows all of the construction with all agencies (AWWU, MOA, DOT)

AMATS

- Speed deterrents
- More robust traffic unit at APD would be really helpful
    - What is an appropriate number for our population, lane miles, etc?
    - Enforcement does reduce fatalities
- Commuter rail
- Coordination with Uber or Lift for public transportation

DOT&PF (Dave Post)

- Is there an online ride sharing information/program?
- Vivian responded that there is--LinkAK
- Need to promote van pool better

APD

- Increase resources (grow traffic unit)
- Emergency lanes/shoulders built to accommodate emergency vehicles and possibly be used for traffic
- Emergency turn arounds built or altered to be able to be used to transition traffic from one side of the highway to the other
- Frontage road between Muldoon and Highland (improved detour routes)
- Adjustable speed signs
    - Generally, are advisable only, not enforceable

MOA Traffic

- Improved communications with the travelers
- Having people ready to go at trouble spots
- Park and Ride lot security

Other comments:

- New MTP does call for HOV lanes
- Better placement of message board
- Eklutna bridge is the only bridge with over height detection
- Freight—biggest problem is getting them around an incident (getting them thru/across a median), highway isn't wide enough for them turnaround, not much volume of freight so it isn't a big issue

Stakeholders were thanked for their time and for sharing such important information.

Copies of the presentation materials will be distributed along with the meeting summary notes to all attendees.

KINNEY ENGINEERING, LLC

MEETING SUMMARY

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Meeting:	Stakeholders Meeting
Date/Time:	April 17, 2018 11:00 am – 2:00 pm
Location:	MOA Permit Center, Training Room 4700 Elmore Road
Team Attendees:	Edith McKee, PE, DOT&PF Jeanne Bowie, PE, Kinney Engineering (KE) Joann Mitchell, PE, KE Heather Edic, EI, KE Kevin Miller, PE, Kapsch Imran Inamdar, Kapsch
Other Attendees:	Rick Steiding, APD Duanne Fujimoto, APD Vivian Underwood, AMATS John Miller, ASD Student Transportation Warren Ulrich, Reliant Transportation Jon Scudder, JBER Planning Kent Kohlhase, MOA PM&E Kristen Langley, MOA Traffic Carol Wong, MOA Planning Mark Roberts, State Emergency Operations Center (SEOC) David Post, DOT&PF
Meeting Materials:	• Agenda • Project fact sheet

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> Vivian Underwood, AMATS, asked how towing was handled in that project corridor. Imran explained that the police have a list of different towing companies and the capabilities of each. When an incident occurs, VDOT or the police call a towing company that has the necessary equipment. In addition, tow trucks stage themselves in some areas so they can more quickly respond. Some places also use push-bumpers to quickly get disabled vehicles off the road.
>
> Kristen Langley, MOA Traffic, mentioned that in California they have dedicated incident response teams and Rick Steiding, APD, mentioned that California also has recurrent frequent patrols that clear the highway and shoulders of any disabled vehicles or debris, which helps prevent motorists from being distracted and causing further congestion.

Imran also talked about different incentivizing ideas that have been implemented. The Google campus has a program where single occupant drivers “pay” those that carpool. Imran also mentioned that in the DC area they use demand tolling (HOT lanes). It was mentioned that the Mat-Su Borough Long Range Transportation Plan (LRTP) identified some park and ride lots to be developed and that vanpooling is a popular option of public transportation for Mat Su commuters.

Jeanne then reviewed the status of the project, including a summary of the online survey results (*see attachment*). The question was raised as to whether or not the recent bridge incident skewed the results. Heather Edic, who has

been delving into the results, stated that the responses before the incident appear consistent with the answers after the event.

To better understand how incidents are handled, Jeanne led a discussion of the four stages of an incident: Detection and Verification, Response, Clearance, and Responders Safety.

DETECTION & VERIFICATION
Means by which an incident is detected:

- 911 call
  - Calls go to APD and they decide who to send out in response (APD or AFD)
    - APD always sends an officer if they get a call (although it may take a long time for an officer to reach the scene if no injuries were reported)
    - AFD will respond to an incident if there was a medical or fire emergency reported
    - APD also calls ASD to alert them
  - For incidents outside of Anchorage (Knik River and north), 911 MatCom calls the State Troopers
- ASD bus drivers witness an accident
  - ASD (John Miller) goes out to verify
  - Nixle also alerts ASD of an incident
- Officers on the road come across a crash
- Google maps, Waze or other apps
- Radio stations/Facebook/other social media

Comments:

- Traffic cameras aren't used to detect crashes (they also get overwritten every 3 days)
- No real-time reporting to DOT&PF
  - Unless a big infrastructure issue, even guardrail damage will take at least a business day to get reported
- APD can issue message on big sign (DMS)
  - Supervisor on the shift requests dispatch to issue message
    - Strict guidelines on the messages are required in accordance with the DOT&PF agreement
  - DMS was installed about 25 years ago, no one knows why that location was chosen
    - Agreement amongst the stakeholders that it isn't in the right location
- APD will do traffic control if needed for motorists to get around a crash
  - Shaman has a term contract with APD and they will do the traffic control if necessary (for lane or road closures of longer than a couple of hours)
  - APD does all incident traffic control unless there is a very large incident with infrastructure issues, then they will coordinate with multiple agencies, like DOT, to come up with detours, etc.
- Nixle Alerts: APD dispatch contacts their Public Information Officer (PIO) who then issues the alert. If after normal business hours, dispatch issues the alert
  - There are 48,000-52,000 subscribers
  - 511 gets updated when Nixle alert goes out via an automated link
  - Direct link also goes to the DOT website, apps, and Facebook
- APD has portable message boards that they can use (in a van, set up on patrol car)
- APD does not notify radio stations and APD's radios are on a secure channel (no one can listen into the scanner)

RESPONSE (actions that various agencies take after incident is verified)

- APD responds to every crash
  - If there are injuries, AFD responds (AFD will be dispatched if they know there are injuries, APD will call AFD from the scene if they determine AFD is needed)
    - Rollovers are assumed to involve injuries
    - If AFD goes out, an ambulance, truck, battalion chief, and an additional apparatus if extrication is needed are sent to the scene. If a helicopter is needed (1 every 2 to 3 months), the highway gets closed down. Fire engines are used to block traffic.
    - If medics have to respond, it is most likely that the highway will get shut down (because the road is too narrow for the emergency response vehicles to maneuver)

        - AFD follows their protocols to determine response speed
    - 3D scanners are used only in major crashes
        - Speeds things up but it's still very time consuming to collect the evidence
        - Fatalities are treated as homicides (minimum 2 hour shut down)
        - APD is working on getting a drone for mapping—this will speed up the data collection process
- DEC will be called out if there is a hazardous materials spill
- Tow trucks
    - Tow trucks are not called out during rush hour (ties up traffic too much)
    - For non-injury collisions, APD can use push bumpers to get disabled vehicles off the road quickly
- Wildlife-Vehicle Collisions
    - APD is dispatched, they call a charity to harvest the moose
        - Slows down traffic even when it is off the road
        - Trying to get charities to haul the moose away and butcher it off-site
- Commercial vehicles (including tour buses) have a different protocol and they send out their own safety officers
- DOT&PF is called only when there is damage to the infrastructure

Comments:

- Emergency turn arounds aren't designed for high speed but they can be used for emergency response vehicles. However, they also get used by drivers
- The stretch of highway between Highland Road and Muldoon is the worst (Highland Road is the worst point)
    - A frontage road between Highland and Muldoon would be a big help
- Frontage roads are in the draft Metropolitan Transportation Plan (MTP) to provide an alternate route. However, if frontage roads are used during a closure of the Glenn, the traffic then just gets moved onto the frontage road and creates problems there. When the Old Glenn is used as an alternate route during accidents the capacity gets exceeded and it backs-up.
- To use JBER requires a tremendous amount of coordination and approvals
- Traffic Operations Center (TOC) at MOA has only 3 staff members and it is not staffed 24/7. They cannot remotely access the system to adjust signal timing.
- APD would provide traffic control on side streets in rare instances
- Commuter rail could have been implemented if the bridge wouldn't have been open on the Monday after it was damaged.
- Comments were made regarding why people are unlikely to take public transportation with the current set up. Waiting for public transportation in the cold, where will commuters park their vehicles while they commute, is it secure? Sprawled out city without a lot of public transport, bus doesn't go anywhere on base and has a hard time going up hills.
- If a commercial vehicle is in the incident, the commercial company usually sends out a safety personal supervisor and an additional bus if needed (for tour bus companies).
- The question was asked if traffic signal timing should be changed when traffic is diverted onto frontage or other roads. The answer was that the technology is there, but not the resources to do so. The roads and signals may not all be under the same ownership.
- APD discusses their response to major incidents but it is not routine to discuss most incidents in terms of lessons learned and changes to protocols.

CLEARANCE (clearing vehicles out of the roadway)

- Towing
    - APD uses push bumpers when they can
    - There are 9 tow companies that they rotate through
        - Drivers can request a specific company or APD dispatch calls whoever is next on the rotation list
        - When the disabled vehicle is needed for evidence, tow companies have to respond within 45 minutes
            - Otherwise, there is no guarantee that a tow truck will be available. It can take an hour or more for one to reach the scene.

        - Most of the need for towing is during bad weather (motorists going in the ditch)
        - Many tow companies will not respond to certain calls because they don't want to be stuck with the vehicle (drivers are responsible for paying the towing fee and the tow companies don't want to risk not getting paid)
    - Imran suggested offering incentives to companies that clear an accident quickly
    - APD won't contract with many tow companies because their drivers can't pass background checks
    - Private tow companies would be helpful but not currently being used (Special Safety Patrol (SSP) vehicles used to assist disabled vehicles)
        - Probably not enough volume on the Glenn Highway for it
- APD will let Dispatch know when the incident is cleared
- HazMat issue is a big deal
- Highway has narrow shoulders which inhibits emergency vehicles' abilities to get to the scene
    - APD has to use extreme caution to reach the scene
        - Portions of the highway can be closed down so the opposite direction of travel can be used to get AFD to the scene
        - Emergency vehicles can use JBER if necessary
            - The route most likely used is not maintained
            - If it's clogged up on the highway, it's clogged up on base so not always helpful
    - Past Muldoon is where it gets most difficult to reach a scene
    - AFD and APD can dispatch from Eagle River and the Chugiak FD can also be called in

RESPONDERS SAFETY

- Police Academy only spends about 1 hour in traffic control training
- Alaska does have a "move over" law but enforcing it is a low priority because of lack of resources
    - AMATS could help with a campaign to educate the public
- Three to four officers have been struck outside their vehicle in the last 20 years. It is more common to hit an officer in their vehicle.
- Safety is a bigger issue during construction, lots of cars come speeding through the construction zone. APD mentioned there are only about six officers in the traffic department which includes Glenn and Seward Highway traffic patrolling.
- Speed signs with built in radar are effective but only good for two lane roads.

Each stakeholder was then asked about their **goals**—what do they hope this project will accomplish?

DOT&PF (Edith McKee)

- identify needed infrastructure
    - there are a lot of crashes in one area we can look at the cost benefit of adding additional infrastructure
    - What alternatives do we have right now if an accident occurs in certain locations, identify areas that have no viable infrastructure alternatives already set in place
- identify incentives for mass transit—what would it take to get more people on the bus, train, van pool, etc?

MOA Planning

- better construction coordination (and special events)
- more/better post incident debriefs, where was there too much overlap, identify gaps
- Need transit coordination

ASD Transportation

- Better communication of construction. Having one place that shows all of the construction with all agencies (AWWU, MOA, DOT)

AMATS

- Speed deterrents
- More robust traffic unit at APD would be really helpful
    - What is an appropriate number for our population, lane miles, etc?
    - Enforcement does reduce fatalities
- Commuter rail
- Coordination with Uber or Lift for public transportation

DOT&PF (Dave Post)

- Is there an online ride sharing information/program?
- Vivian responded that there is--LinkAK
- Need to promote van pool better

APD

- Increase resources (grow traffic unit)
- Emergency lanes/shoulders built to accommodate emergency vehicles and possibly be used for traffic
- Emergency turn arounds built or altered to be able to be used to transition traffic from one side of the highway to the other
- Frontage road between Muldoon and Highland (improved detour routes)
- Adjustable speed signs
    - Generally, are advisable only, not enforceable

MOA Traffic

- Improved communications with the travelers
- Having people ready to go at trouble spots
- Park and Ride lot security

Other comments:

- New MTP does call for HOV lanes
- Better placement of message board
- Eklutna bridge is the only bridge with over height detection
- Freight—biggest problem is getting them around an incident (getting them thru/across a median), highway isn't wide enough for them turnaround, not much volume of freight so it isn't a big issue

Stakeholders were thanked for their time and for sharing such important information.

Copies of the presentation materials will be distributed along with the meeting summary notes to all attendees.

Appendix C: Data Collected from Stakeholder Agencies

Appendix D: Stakeholder Meeting Summaries

KINNEY ENGINEERING, LLC

MEETING NOTES

Title: Glenn Highway Integrated Corridor Management Study
Stakeholder meeting: Vivian Underwood, AMATS Planner

Date: April 18, 2018

Time: 9:00 AM

Location: Muni Planning Conference Room

Attendees: MOA: Vivian Underwood
KE: Joann Mitchell, Jeanne Bowie
Kapsch: Imran Inamdar

- There is a direct connection from Nixel to 511 – Vivian receives alerts from 511 directly following receiving the Nixel alert.
- AFD would like better information about road closures due to construction
    - MOA PM&E (Shane Locke) used to maintain a website that had all muni-wide construction projects. The website is no longer up and information is shared via fax
- A successful Traffic Operations Center (TOC) would require State and Muni to work together and it would have to be virtual. There isn't sufficient funding for implementation.
- LinkAK provides information to travelers on travel options (modes available and how long they take). There is a link on the MOA website (muni.org). Vivian would like to see a link to transit from 511, and make LinkAK statewide, not just Muni
- Nixel is a subscription service. APD is the most active.
- It would be good for travelers to know how long a closure is going to be and if this information was posted on the DMS sign
- Vivian asked about the use of highway advisory radio. Imran explained that the use of radio is being phased out in some states because it takes too long to post messages (can be 30-45 minutes)
- The 2035 MTP recommends HOV lanes for the Glenn Hwy
- The 2015 Congestion Management Plan report includes metrics
- Tech memo #1 of the 2040 plan discusses new performance measures and Federal
- Incident clearance time is difficult to determine. Crash reports provide good information on the incident response time (time of accident and time first responders arrive); however, the time specified on the form when the incident is cleared is frequently wrong, as the police officer just indicates the time that the report is completed. Some information could potentially be gathered from Nixel, as Nixel alerts tell the public that an incident has occurred and then when the area is cleared; however, it is uncertain how accurate the timing of those alerts is. (Do they reflect the actual time of the incident and time of clearing?)
- Who are the 3rd party data providers in Alaska? Are there special concerns in Alaska (not enough demand, technical limitations, etc?) (Imran to check)
- Bart Rudolph from MOA Transit might have info about Transit's thoughts and ideas
- The Commuter Rail Committee is discussing a pilot project and discussing what it would take to make commuter rail a year round option

- 2040 MTP update discusses HOT vs HOV lanes
- The first mile/last mile issue of transit needs to be addressed. Perhaps employers would be willing to provide shuttles for their employees
- Imran discussed how State Farm sponsors rolling highway patrol trucks in other states
- Debbie Ossiander with the Eagle River Chamber of Commerce would be a good contact
- Need to look into the Eagle River Traffic Mitigation project and the Artillery Road interchange (PTS is managing the Traffic Mitigation project for MOA)
- The LRTPs list frontage road construction projects
- The MTP includes a Glenn Hwy interchange study
- MSB LRTP includes park & ride facilities for the Glenn Hwy

KINNEY ENGINEERING, LLC

MEETING NOTES

Title: Glenn Highway Integrated Corridor Management Study
Stakeholder meeting: Val Rader

Date: April 18, 2018

Time: 1:00 PM

Location: DOT&PF Val's office

Attendees: DOT&PF: Val Rader
KE: Joann Mitchell, Jeanne Bowie
Kapsch: Kevin Miller, Imran Inamdar

- APD is the only one that puts messages on the DMS
    - Shannon McCarthy (DOT&PF spokesperson) sends them a schedule of generic safety messages to post at certain times
    - Because APD knows the status of incidents, they are best suited to post the messages, they are also 24/7 whereas DOT&PF is not
    - Val offers technical support
- New network installations are fiber
- The objective is to use equipment with the same specifications to promote interoperability between systems.
- There are "handshake" agreements between agencies to share information and coordinate
- RWIS is a specialty
- DOT&PF does not record, though they have the ability

KINNEY ENGINEERING, LLC

MEETING NOTES

Title: Glenn Highway Integrated Corridor Management Study
Stakeholder meeting: DOT&PF Staff

Date: April 18, 2018

Time: 11:00 AM

Location: Muni Traffic Conference Room

Attendees: MOA: John Crapps
KE: Jeanne Bowie
Kapsch: Kevin Miller, Imran Inamdar

- MOA does not change signal timing in Eagle River in reaction to incidents on the Glenn Highway because the interchange ramp intersections are the limiting factor in terms of capacity. The existing Hiland interchange capacity is too small for demand.
- MOA uses Centrax/Econolight controllers
- MOA has traffic cameras at the Airport Heights signal, but no cameras in Eagle River at this time
- MOA uses mostly loop detection now, but is experimenting with radar detection (wavetronics)
- The Virtual Traffic Operations Center has all of the equipment it needs to operate, but a 24/7 operator was cut from the budget several years ago and never been replaced.

KINNEY ENGINEERING, LLC

MEETING NOTES

Title: Glenn Highway Integrated Corridor Management Study
Stakeholder meeting: DOT&PF Staff

Date: April 18, 2018

Time: 1:30 PM

Location: DOT&PF Fishbowl conference room

Attendees: DOT&PF: Edith McKee, Chris Bentz, Scott Thomas
KE: Joann Mitchell, Jeanne Bowie
Kapsch: Kevin Miller, Imran Inamdar

- On Monday, April 16th there was a debrief meeting on the Glenn Hwy bridge incident with DOT&PF and APD (they are the two parties in responsible charge for the Glenn)
- How does DOT&PF respond on a 24/7 basis?
    - Rely on APD or AST because they have 24/7 operations and DOT&PF does not have 24/7 staff
    - Law enforcement calls DOT&PF when needed
        - DOT&PF gets called when their heavy equipment is needed, occasionally for traffic control
        - APD calls Shaman (traffic control contractor) when needed (Shaman has a term contract with MOA, DOT&PF has supplemented the funding)
- What improvements could be made in the future?
    - More/better coordination to match volume and incidents
    - There really isn't an incident management plan, but there are good working relationships between the individuals at the different agencies
    - Incident response training and table top excercises
    - Railroad incident training
    - M&O is down-staffed. Private industry may be able to step-in the support operations
- In general, DOT&PF is looking for low cost improvements that do not require more employees to operate or that come with funding for the added folks it takes to operate it.
- Public-private partnerships to provide traveler information could work.
- Rolling patrols are not used—staff and funding resources do not exist to make it happen (though it was on the 2014 list of mitigation tools)
- The message sign was installed in 1989. Scott does not know why it went where it did, but thought the DSR might explain it. May have been related to the ER hill (brake light hill)
- DOT&PF has a list of about 11 sites where they would like to see additional message signs installed (not a big priority, but if money was available, they would take them). There is a manual for describing how the message signs should be operated.
- Shoulder running—for transit, traffic, HOV is a possibility if funding is available, but it will require widening and strengthening of shoulders in several locations.
- Evacuation planning:

  - There could be scenarios such as fire on Eagle River or catastrophic events such as an earthquake that require evacuation.
  - Reversible lanes/contra-flow lanes are an option but these need to be actively managed and DOT&PF doesn't have the resources. May require widening of ramps and other safety measures.
- Require longer merge lanes
- Frontage roads
  - West side is challenging with the military property but the Davis Hwy is there. National Guard and JBER would like to have an alternative route onto base
  - East side is more feasible – estimate the existing system is about 70% complete.
- Scott is updating the 2014 list and prioritizing it
- DOT&PF is looking at interchange revisions—Aaron J should have info
- Artillery Interchange project—this is in the early stages of design but final design is not yet funded
- Southbound ER bridge needs construction funding
- Hiland Rd on-ramp. Scott and Ron developed a low cost design for a new on-ramp (that ramp has enough volume for its own lane, should not have to merge)
- More cameras would be nice, they should be easy to add because of existing contract
  - RWIS gets used as a traffic condition camera but gets updated only every 15 minutes
- In May/early June there will be another table top meeting about incident management on the Glenn Hwy. Scott mentioned that we should attend.
- The report should look at cost of incidents.
- High speed crossovers
- Dan Monteleone, DOT&PF Safety Officer, is ready to set up incident command
- Roundabouts at the top of ramps is on Scott's list
- Improve gap selection during merging from on-ramp to the highway. Scott gets asked regularly about metering the ramps. He thinks it will only make backups and delays worse.
- Need to identify low cost, easy to implement items

KINNEY ENGINEERING, LLC

MEETING MINUTES

Title: Glenn Highway Integrated Corridor Management Study
Stakeholder meeting: ARRC

Date: March 16, 2018

Time: 1:30 PM

Location: ARRC

Attendees: Brian Lindamood (ARRC), Edith McKee (DOT&PF), Jeanne Bowie, Joann Mitchell (KE)

OCEAN DOCK ROAD RECONNAISSANCE STUDY

- The railroad prefers Alternative 4. It provides fewer skewed crossings, which are undesirable. More thought would need to go into exactly where the tracks run.
- The main opposition that the railroad has to Alternative 3 is that it makes the skewed crossing northwest of the subject intersection worse.
    - Adding the left turn lane for turning into the North Star Terminal area means that left turning trucks may be stopped on the tracks, waiting to turn, and not see a train coming along the skewed track directly behind the truck.
    - This could be mitigated by stopping the traffic from the Port prior to the North Star driveway, and also stopping the North Star driveway traffic. There would have to be sensors on both the east and the west tracks that triggered the gates at the North Star driveway.
- Jeanne asked Brian if the "greenbelt" around Government Hill is railroad land that has been leased to the Municipality. Brian confirmed that it is and he will see if he can find more information about the lease.

Action Items:

- **KE to alter graphics/narrative for Alternative 3 and indicate the ARRC preference for Alt 4 in the report.**
- **Brian Lindamood to search for lease language for "greenbelt" around Government Hill to determine whether or not the land is leased as a park.**

GLENN HIGHWAY INTEGRATED CORRIDOR MANAGEMENT STUDY

State Fair

- The railroad requires very little coordination with anyone else to run trains to the fairgrounds. Most coordination that is done is simply to gather sponsorships to help subsidize the trip.

- The trip to the fairgrounds takes around 1 hour and 20 minutes. The slowest part of the trip is the last 5 miles into Palmer, which are on tracks that require train speeds of 10 mph or less.

- ARRC is running 6 to 8 passenger trains a day on State Fair weekends and it consistently sells out.

Other Passenger Service

- During the 2015 Willow wildfire, ARRC tracks remained open while the Parks Highway was closed. ARRC ferried many persons around the fire back and forth between Wasilla and Talkeetna. Tour companies who would normally carry passengers on buses reached out to ARRC passenger services and filled otherwise empty spots on ARRC trains.

- Normally, ARRC carries tour passengers on the Parks Highway, but their luggage is carried on trucks. During the Willow fire, ARRC had to arrange to take the luggage, as well.

- If the Glenn Highway were closed, ARRC may be able to provide services to carry some people around the closure.

    - In summer, ARRC has all trains running at or close to capacity and the tracks themselves are at near capacity. They could add trains to help in an event, but it would not be easy and not realistic to do for a one or two day event.

    - In winter, ARRC has limited capacity of train cars that are winterized (about 12 pieces) and would need time to get those pieces that normally are not used in the winter ready for use. Most of their train cars are not designed for winter passenger use and do not have adequate heating to make for a comfortable ride.

    - Equipment that runs regularly in the winter must be stored inside between trips. ARRC would have to move stuff that is normally stored in their shed over the winter out of the shed and would have to plug that equipment into electrical power to keep it warm.

Other Ideas

- One of the barriers to the train serving commuters either short or long term is the problem of getting folks from their house to the train station and from the train station to their work.

    - There is sufficient parking at the Wasilla train stop to accommodate commuters.

    - The railroad could potentially partner through share-a-ride vans to carry passengers from the Anchorage depot to their place of employment.

    - Big employers might be willing to provide a shuttle for their employees from the train station to their offices.

    - People Mover has expressed that they are not interested in stopping at the Anchorage depot, for example as part of route 11 to Government Hill, because delay at the train crossings on Ocean Dock Road would significantly impact their travel time.

    - There are a significant number of commuters that work on JBER. However, due to security issues, it would be difficult to add a train stop on the base.

- While ARRC carries freight through the corridor, there are no facilities for loading or unloading freight in the MSB, so all goods to the MSB are trucked there.

Action Items:

- **Brian to gather information on how many passengers are riding the train to the State Fair.**

Appendix E: Community Council Meeting Summaries

KINNEY ENGINEERING, LLC

MEETING SUMMARY

Project:	AMATS: Glenn Highway Integrated Corridor Management (ICM) Study Project No. CFHWY00289/0A16052
Meeting:	South Fork Community Council
Date/Time:	March 1, 2018 7:00 pm
Location:	Eagle River High School, 8701 Yosemite Drive, Eagle River
Team Attendees:	Jeanne Bowie, PE, PhD, PTOE, Kinney Engineering (KE) Joann Mitchell, PE, KE
Public Attendees:	Approximately 32
Meeting Materials:	• Project fact sheets • Display boards of project limits • Information card with survey link and project website address

Jeanne Bowie gave a brief overview of the project. She explained that the purpose of the project is to improve the efficiency of moving people and goods through the corridor, with an emphasis on non-recurring congestion (congestion due to crashes, construction, weather, etc). Jeanne discussed the online survey that is available and encouraged everyone to spend a few minutes taking the survey. She mentioned that we have had more than 1,000 people take the survey but we are looking for more input.

Jeanne explained that the project team is currently surveying agency stakeholders to determine how they react to an event on the highway as well as who they coordinate with and how they coordinate and communicate. She also mentioned the data collection efforts that are underway, including evaluating crashes, weather data, and looking at traffic volumes.

The study will consider feasible means to mitigate the traffic impact of non-recurring events. There will be a range of alternatives evaluated including improved communication, improved coordination between agencies, and improved infrastructure (such as frontage roads, median openings, etc). There will be a Public Open House in late May or early June where the draft plan will be presented for public review and comment.

Several comments/questions were raised by the attendees:

- Eagle River Loop Rd onto the highway gets backed up any time there is any kind of accident on the highway. Traffic also gets backed up on Yosemite Drive because cars can't turn onto Eagle River Loop Road. The suggestion was that a better interchange design would help alleviate some of that.

- *Will the study consider using the railroad as an alternative?* Jeanne responded that yes, the study will look at how a passenger train could be used when there is an event on the highway.

- *What kind of data trends are you seeing from the surveys completed thus far?* Jeanne and Joann responded that we haven't look closely at the data yet other than to verify that responses are coming from all geographic areas, with a high amount of participation from the Eagle River area.

- The Mirror Lake interchange is horrible—always backs up.

- *Is the ICM Study limited to just the Glenn Highway or will you look at other roads?* Jeanne answered that the study includes access to the Glenn and roads that provide alternative ways around the Glenn.

All attendees were reminded and encouraged to complete the Metro Quest survey.

KINNEY ENGINEERING, LLC

MEETING SUMMARY

Project:	AMATS: Glenn Highway Integrated Corridor Management (ICM) Study Project No. CFHWY00289/0A16052
Meeting:	Eagle River Community Council
Date/Time:	March 8, 2018 7:00 pm
Location:	12001 Business Blvd, Room 170, Eagle River
Team Attendees:	Jeanne Bowie, PE, PhD, PTOE, Kinney Engineering (KE) Danielle Bischoff, PE, KE
Public Attendees:	Approximately 30
Meeting Materials:	• Project fact sheets • Display boards of project limits • Information card with survey link and project website address

Jeanne Bowie gave a brief overview of the project. She explained that the purpose of the project is to improve the efficiency of moving people and goods through the corridor, with an emphasis on non-recurring congestion (congestion due to crashes, construction, weather, etc). Jeanne discussed the online survey that is available and encouraged everyone to spend a few minutes taking the survey. She mentioned that we have had 1,461 people take the survey as of today, but we are looking for more input.

Jeanne explained that the project team is currently surveying agency stakeholders to determine how they react to an event on the highway as well as who they coordinate with and how they coordinate and communicate. She also mentioned the data collection efforts that are underway, including evaluating crashes, weather data, and looking at traffic volumes.

The study will consider feasible means to mitigate the traffic impact of non-recurring events. There will be a range of alternatives evaluated including improved communication, improved coordination between agencies, and improved infrastructure (such as frontage roads, median openings, commuter rail, HOV lanes, etc). There will be a Public Open House in late May or early June where the draft plan will be presented for public review and comment.

Several comments/questions were raised by the attendees:

- *When will the survey close?* Danielle responded that the survey will be closing April 1st.
- A community member commented that he had already taken the survey and he liked the way it was put together.

All attendees were reminded and encouraged to complete the Metro Quest survey. Jeanne reminded the high school students in attendance that they are eligible to take the survey as well.

KINNEY ENGINEERING, LLC

MEETING SUMMARY

Project:	AMATS: Glenn Highway Integrated Corridor Management (ICM) Study Project No. CFHWY00289/0A16052
Meeting:	Birchwood Community Council
Date/Time:	March 14, 2018 7:00 pm
Location:	Beach Lake Ski Chalet (17611 S Birchwood Loop Road, past Chugiak High School)
Team Attendees:	Danielle Bischoff, PE Kinney Engineering (KE) James Smith, PE, KE
Public Attendees:	Approximately 13
Meeting Materials:	• Project fact sheets • Information card with survey link and project website address

Danielle Bischoff gave a brief overview of the project. She explained that the purpose of the project is to improve the efficiency of moving people and goods through the corridor, with an emphasis on non-recurring congestion (congestion due to crashes, construction, weather, etc). Danielle discussed the online survey that is available and encouraged everyone to spend a few minutes taking the survey. She mentioned that we have had more than 1,500 people take the survey but we are looking for more input.

Danielle explained that the project team is currently surveying agency stakeholders to determine how they react to an event on the highway as well as who they coordinate with and how they coordinate and communicate. She also mentioned the data collection efforts that are underway, including evaluating crashes, weather data, and looking at traffic volumes.

The study will consider feasible means to mitigate the traffic impact of non-recurring events. There will be a range of alternatives evaluated including improved communication, improved coordination between agencies, and improved infrastructure (such as frontage roads, median openings, etc). There will be a Public Open House in late May or early June where the draft plan will be presented for public review and comment.

Several comments/questions were raised by the attendees:

- Several attendees asked if it was possible to retake the survey to locate more incident locations. They were told that they could take the survey again and just skip to the map page section.

- There were some questions which lead to a discussion about the meaning and purpose of only looking at “non-recurring congestion”. The group seemed to have a hard time understanding the type of events we were looking for in the survey, and how the survey results would be used in a final report.

All attendees were reminded and encouraged to complete the Metro Quest survey. The presentation and the Q/A session took about 10 minutes.

KINNEY ENGINEERING, LLC

MEETING SUMMARY

Project:	AMATS: Glenn Highway Integrated Corridor Management (ICM) Study Project No. CFHWY00289/0A16052
Meeting:	Eagle River Valley Community Council
Date/Time:	March 14, 2018 7:00 pm
Location:	Greuning Middle School, 9501 Lee Street, Eagle River
Team Attendees:	Jeanne Bowie, PE, PhD, PTOE, Kinney Engineering (KE) Shelley Giraldo, EIT, KE
Public Attendees:	Approximately 13
Meeting Materials:	Project fact sheets with survey link and project website address

Jeanne Bowie gave a brief overview of the project. She explained that the purpose of the project is to improve the efficiency of moving people and goods through the corridor, with an emphasis on non-recurring congestion (congestion due to crashes, construction, weather, etc). Jeanne discussed the online survey that is available and encouraged everyone to spend a few minutes taking the survey. She mentioned that while we have had more than 1,500 people take the survey, we are looking for more input.

Jeanne explained that the project team is currently surveying agency stakeholders to determine how they react to an event on the highway as well as who they coordinate with and how they coordinate and communicate. She also mentioned the data collection efforts that are underway, including evaluating crashes, weather data, and looking at traffic volumes.

The study will consider feasible means to mitigate the traffic impact of non-recurring events. There will be a range of alternatives evaluated including improved communication, improved coordination between agencies, and improved infrastructure (such as frontage roads, median openings, etc). There will be a Public Open House in late May or early June where the draft plan will be presented for public review and comment.

Several comments/questions were raised by the attendees:

- *Are we looking for safety improvements? Over in the European theatre they have emergency telephones every mile or so. There are red flashing lights mounted above the emergency telephones that can be activated in an emergency.* Jeanne responded that yes, the project does consider safety improvements. While mitigating congestion due to crashes is what we are focusing on, we are interested in collecting all ideas and input.

- *Will the study consider using the railroad as an alternative?* Jeanne responded that yes, the study will look at how a passenger train could be used when there is an event on the highway.

- *Will the project take using Farm Road as an alternate access into account?* Jeanne responded that while she wasn't sure of the location of Farm Road, she thinks that this alternative is and should be part of the conversation. Ideas like this are exactly the kind of input we are looking for.

- *The Community Council has been having ongoing conversations about the need for improvements at the Artillery Road intersection. Please make sure that upgrades to this intersection are taken into consideration for this project.* Jeanne responded that yes, while our focus is not increasing capacity for recurring congestion, we will be considering all types of solutions for non-recurring congestion. This may include considerations for adding lanes to the Glenn Highway or improving frontage roads.

- *How are you soliciting input?* Jeanne responded that the link to the MetroQuest survey has been posted on the Facebook pages for the Glenn Highway Traffic Report and the DOT. Additionally, the project team has been presenting at community council meetings and will be hosting a public open house in May/June.

- *Tom Freeman asked for Jeanne's number.* Jeanne kindly acquiesced.

All attendees were reminded and encouraged to complete the Metro Quest survey.

KINNEY ENGINEERING, LLC

MEETING SUMMARY

Project:	AMATS: Glenn Highway Integrated Corridor Management (ICM) Study Project No. CFHWY00289/0A16052
Meeting:	Chugiak Community Council
Date/Time:	March 15, 2018 7:00 pm
Location:	Chugiak Benefit Association Building, 18606 Old Glenn Hwy, Chugiak
Team Attendees:	Jeanne Bowie, PE, PhD, PTOE, Kinney Engineering (KE) Danielle Bischoff, PE, KE
Public Attendees:	Approximately 17
Meeting Materials:	• Project fact sheets • Information card with survey link and project website address

Jeanne Bowie gave a brief overview of the project. She explained that the purpose of the project is to improve the efficiency of moving people and goods through the corridor, with an emphasis on non-recurring congestion (congestion due to crashes, construction, weather, etc). Jeanne discussed the online survey that is available and encouraged everyone to spend a few minutes taking the survey. She mentioned that we have had more than 1,500 people take the survey, but we are looking for more input.

Jeanne explained that the project team is currently surveying agency stakeholders to determine how they react to an event on the highway as well as who they coordinate with and how they coordinate and communicate. She also mentioned the data collection efforts that are underway, including evaluating crashes, weather data, and looking at traffic volumes.

The study will consider feasible means to mitigate the traffic impact of non-recurring events. There will be a range of alternatives evaluated including improved communication, improved coordination between agencies, and improved infrastructure (such as frontage roads, median openings, etc). There will be a Public Open House in late May or early June where the draft plan will be presented for public review and comment.

Several comments/questions were raised by the attendees:

- Discussion about if the link to the survey is posted on the community council page. A community council board member will confirm that the link is posted.
- *Are alternative routes being considered*? Jeanne responded that yes, the study will look at this.
- *Have we observed specific areas that have been called out with the most issues*? Jeanne responded that no, we have not looked at the data in-depth yet.
- Frontage roads connecting Mirror Lake to Thunder Bird Falls is a priority of this community council.
- A new southbound bridge over Eagle River is also a priority for the community council as this area commonly backs up during morning rush hour, especially in the winter.
- Vehicles left on the side of the road are an issue. He would like to see them removed more quickly, currently they will remain there for a week or more and frequently cause traffic to slow down. He suggested that contracts with towing companies be considered so that vehicles are removed within hours of an incident.

- *Will the study be looking at the message board?* Jeanne responded that yes, the study will be looking at this. The message board receives the information from 511. We have the 511 data and we will be looking through this.

- Suggestions and discussion of the use of portable changeable message board signs on or before the on ramps to indicate when there is a traffic incident impeding the flow of traffic. It is frustrating getting on the highway and getting stuck.

- *Is it possible that the police, fire department, and volunteer fire department don't communicate with each other?* Danielle responded that these agencies do have communication with each other. We are looking to understand how they communicate with each other, what coordination they have with other agencies (such as DOT) and what can we do to improve communication.

All attendees were reminded and encouraged to complete the Metro Quest survey.

Appendix F: AMATS Meeting Summaries

KINNEY ENGINEERING, LLC

MEETING SUMMARY

Project:	AMATS: Glenn Highway Integrated Corridor Management (ICM) Study Project No. CFHWY00289/0A16052
Meeting:	AMATS, Freight Advisory Committee
Date/Time:	February 14, 2018 3:00 pm
Location:	Municipality of Anchorage, Main Conference Room, 4700 Elmore Road, Anchorage
Team Attendees:	Jeanne Bowie, PE, PhD, PTOE, Kinney Engineering (KE) Joann Mitchell, PE, KE
Public Attendees:	Approximately 3
Meeting Materials:	• Power Point Presentation

Joann Mitchell gave a presentation about the project. She explained that the purpose of the project is to improve the efficiency of moving people and goods through the corridor, with an emphasis on non-recurring congestion (congestion due to crashes, construction, weather, etc).

Joann explained that the study would include an online public survey to help us understand how the public gets information about traveling, as well as an agency survey for stakeholders to determine how they react to an event on the highway as well as who they coordinate with and how they coordinate and communicate.

Joann mentioned that other data collection efforts are underway, including evaluating crashes, weather data, and looking at traffic volumes.

The study will consider feasible means to mitigate the traffic impact of non-recurring events. There will be a range of alternatives evaluated including improved communication, improved coordination between agencies, and improved infrastructure (such as frontage roads, median openings, etc). There will be a Public Open House in late May or early June where the draft plan will be presented for public review and comment.

KINNEY ENGINEERING, LLC

MEETING SUMMARY

Project:	AMATS: Glenn Highway Integrated Corridor Management (ICM) Study Project No. CFHWY00289/0A16052
Meeting:	AMATS, Technical Advisory Committee
Date/Time:	March 8, 2018 2:30 pm
Location:	Municipality of Anchorage, Main Conference Room, 4700 Elmore Road, Anchorage
Team Attendees:	Jeanne Bowie, PE, PhD, PTOE, Kinney Engineering (KE) Danielle Bischoff, PE, KE
Public Attendees:	Approximately 30
Meeting Materials:	• Power Point Presentation

Jeanne Bowie gave a presentation about the project. She explained that the purpose of the project is to improve the efficiency of moving people and goods through the corridor, with an emphasis on non-recurring congestion (congestion due to crashes, construction, weather, etc). Jeanne discussed the online survey that is available and encouraged everyone to spend a few minutes taking the survey. She mentioned that we have had 1,461 people take the survey as of today, but we are looking for more input. Jeanne reviewed some of the preliminary findings that we are seeing with the survey.

Jeanne explained that the project team is currently surveying agency stakeholders to determine how they react to an event on the highway as well as who they coordinate with and how they coordinate and communicate. She showed the agencies we have reached out to and those who have responded to our survey. She asked the attendees to reach out to us if they knew of any information that would be beneficial to the study.

Jeanne mentioned that other data collection efforts are underway, including evaluating crashes, weather data, and looking at traffic volumes.

The study will consider feasible means to mitigate the traffic impact of non-recurring events. There will be a range of alternatives evaluated including improved communication, improved coordination between agencies, and improved infrastructure (such as frontage roads, median openings, etc). There will be a Public Open House in late May or early June where the draft plan will be presented for public review and comment.

Several comments/questions were raised by the attendees:

- *Why have HOV lanes not been implemented?* Jim Amundsen responded that HOV lanes cannot be utilized on a 4-lane highway. The 6-lane segment of the highway only extends from Airport Heights to Hiland Rd.

- Stephanie Mormilo commented that she thought it was a very well-designed survey and was happy with the map function.

All attendees were reminded and encouraged to complete the Metro Quest survey.

KINNEY ENGINEERING, LLC

MEETING SUMMARY

Project:	AMATS: Glenn Highway Integrated Corridor Management (ICM) Study Project No. CFHWY00289/0A16052
Meeting:	AMATS, Policy Committee
Date/Time:	March 22, 2018 1:30 pm
Location:	Municipality of Anchorage, Main Conference Room, 4700 Elmore Road, Anchorage
Team Attendees:	Jeanne Bowie, PE, PhD, PTOE, Kinney Engineering (KE) Joann Mitchell, PE, KE
Public Attendees:	Approximately 20, including Policy Committee Members
Meeting Materials:	Power Point Presentation

Jeanne Bowie gave a presentation about the project. She explained that the purpose of the project is to improve the efficiency of moving people and goods through the corridor, with an emphasis on non-recurring congestion (congestion due to crashes, construction, weather, etc). Jeanne discussed the online survey that is available and encouraged everyone to spend a few minutes taking the survey. She mentioned that 1,531 people have taken the survey as of today and the survey is open until April 1, 2018. Jeanne reviewed some of the preliminary findings from the survey.

Jeanne explained that the project team is currently surveying agency stakeholders to determine how they react to an event on the highway as well as who they coordinate with and how they coordinate and communicate. She showed the agencies that have been contacted and those who have responded to the survey.

Jeanne mentioned that other data collection efforts are underway, including evaluating crashes, weather data, and looking at traffic volumes.

The study will consider feasible means to mitigate the traffic impact of non-recurring events. There will be a range of alternatives evaluated including improved communication, improved coordination between agencies, and improved infrastructure (such as frontage roads, median openings, etc). There will be a Public Open House in late May or early June where the draft plan will be presented for public review and comment.

Comments from the committee members:

- Assembly Member John Weddleton suggested that autonomous vehicles should be considered and suggested that the taxi industry be contacted.
- Chris Schulte, MOA, commented that the MetroQuest survey as well done. He found it intuitive and engaging.

Appendix G: Transportation Fair Comments

Project:	AMATS: Glenn Highway Integrated Corridor Management (ICM) Study Project No. CFHWY00289/0A16052
Event:	MSB Transportation Fair
Date/Time:	September 27, 2017
Location:	
Team Attendees:	Jeanne Bowie, PE, PhD, PTOE, Kinney Engineering (KE)
Meeting Materials:	• Project fact sheets • Display boards of project limits • Comment sheets

Public Comments:

Question 1: How do you get information about traffic conditions on the Glenn Highway? What changes do you make to your travel based on that information?

Glenn Highway traffic report on Facebook

Question 2: What alternative travel options do you wish were available/would you be most likely to use? (For example, commuter train or bus, car sharing like Uber of Lyft, driving another route, etc.)

Commuter train!!
Any secondary option.

Question 3: How do you get information about traffic conditions on the Glenn Highway?

- *Waze app*
- *Facebook (Glenn Highway Traffic Report, or other highways reports)*
- *Radio (many folks indicated that information on the radio is usually outdated)*
- *511*
    - *One lady in particular said she looks at the weather cameras*
- *Folks who work in the Valley, but have access to traffic information through work text it out to friends and family who might be on the Glenn*
- *Nixle*

Question 4: Ideas for improvements?

- *Frontage roads*
- *Alternative routes*
- *Wider shoulders to allow disabled vehicles to get off of the highway entirely*
- *Better maintenance (for example, pipes under the road to stabilize temperatures and reduce freeze/thaw impacts)*
- *Build a secondary road next to the railroad alignment*
- *Commuter rail*
- *Shift work hours to reduce the demand in the peak*
- *Knik Arm Bridge*
- *HOV lanes*
- *Add more lanes*
- *Put cable barrier down the middle to reduce cross-over accidents*
- *Lengthen on- and off-ramps so that people can accelerate/decelerate in the auxiliary lanes*
- *Improve signage at S Eagle River Road exit where through lanes are merging and there's a nearby on-ramp*

Project:	AMATS: Glen Highway Integrated Corridor Management (ICM) Study Project No. CFHWY00289/0A16052
Event:	Anchorage Transportation Fair
Date/Time:	February 8th, 2018
Location:	
Team Attendees:	Jeanne Bowie, PE, PhD, PTOE, Kinney Engineering (KE) Joann Mitchell, PE, KE
Meeting Materials:	• Project fact sheets • Display boards of project limits • Comment sheets • Tablets for taking MetroQuest survey

Public Comments:

Public was given the opportunity to complete the MetroQuest surveys at the Anchorage Transportation Fair.

Appendix H: MetroQuest Survey

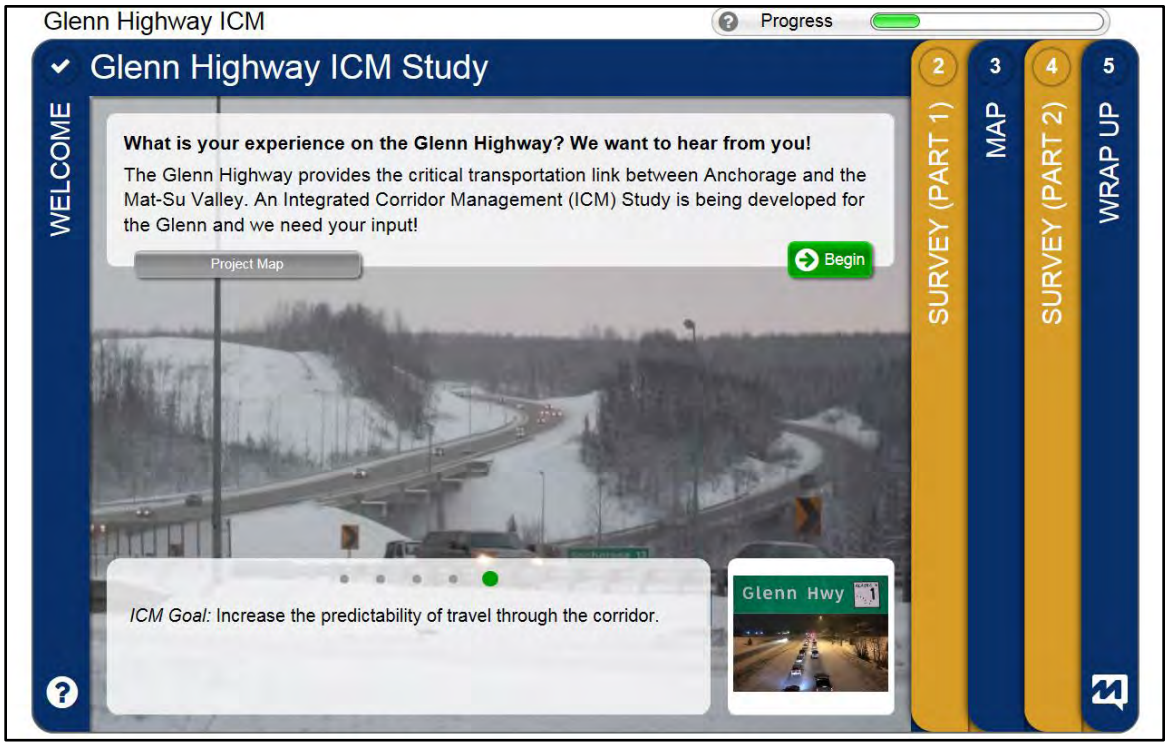

Figure H-1: MetroQuest Survey Home Screen

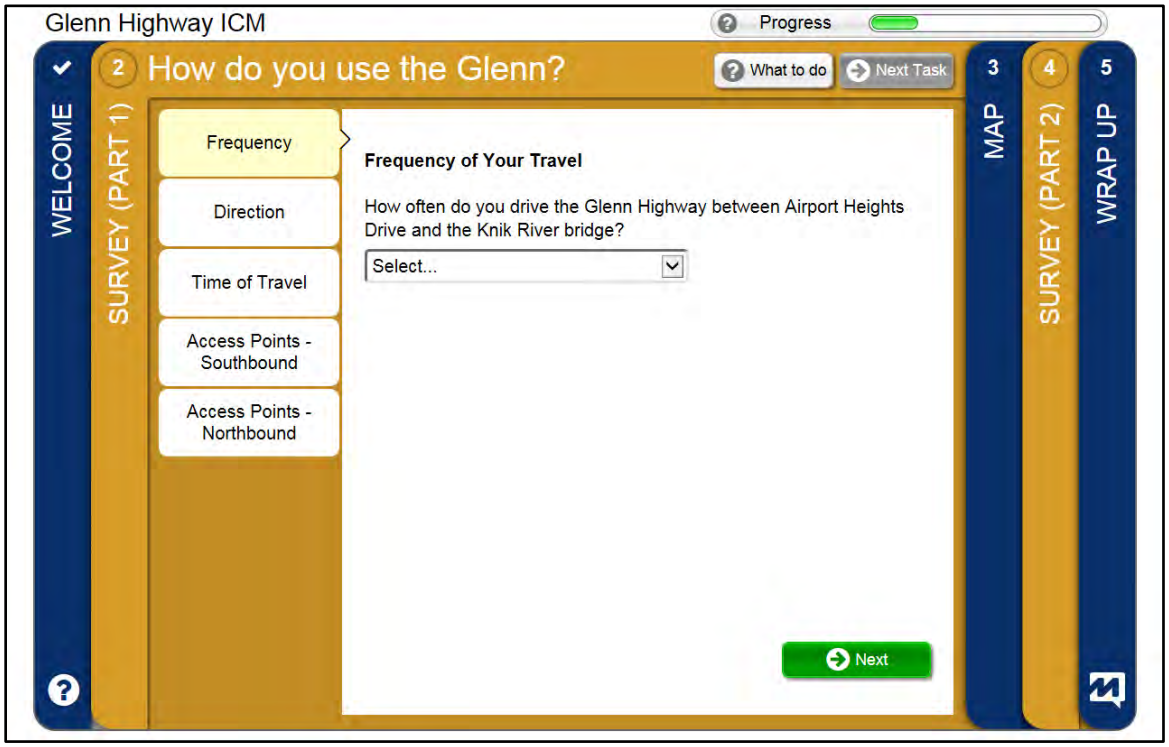

Figure H-2: Survey (Part 1) Frequency of Your Travel

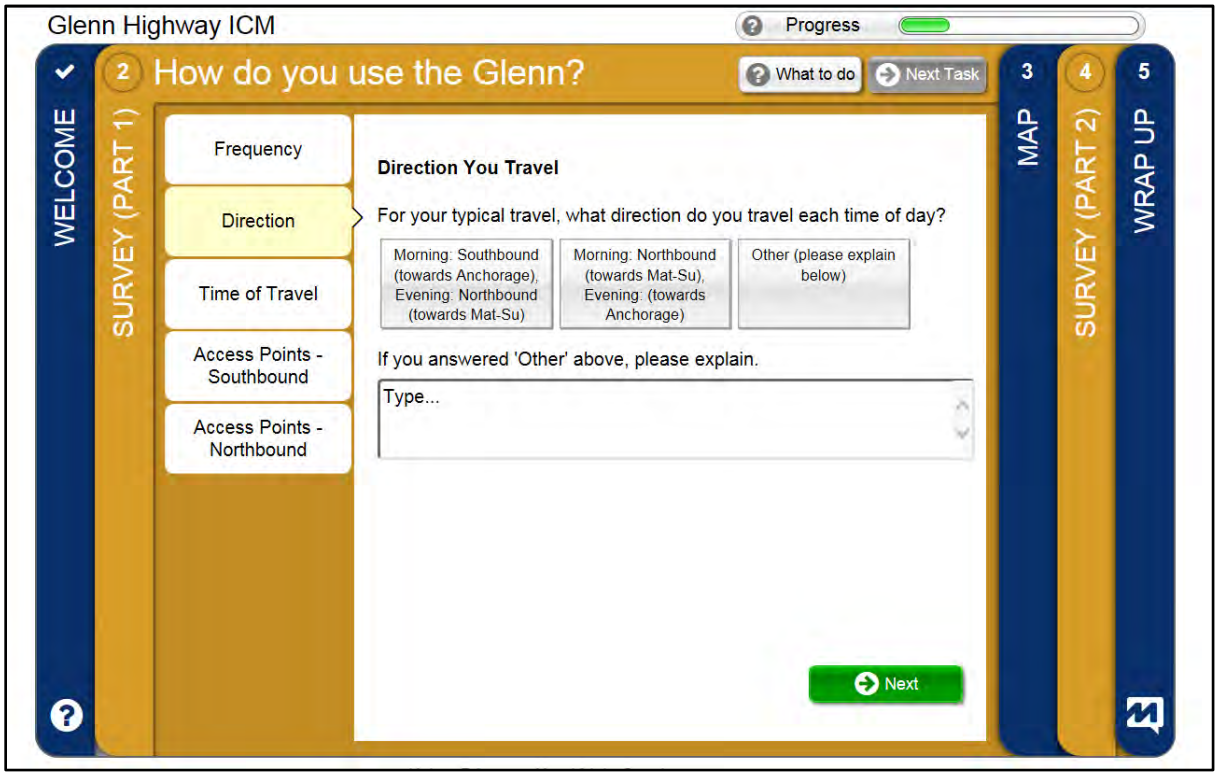

Figure H-3: Survey (Part 1) Direction You Travel

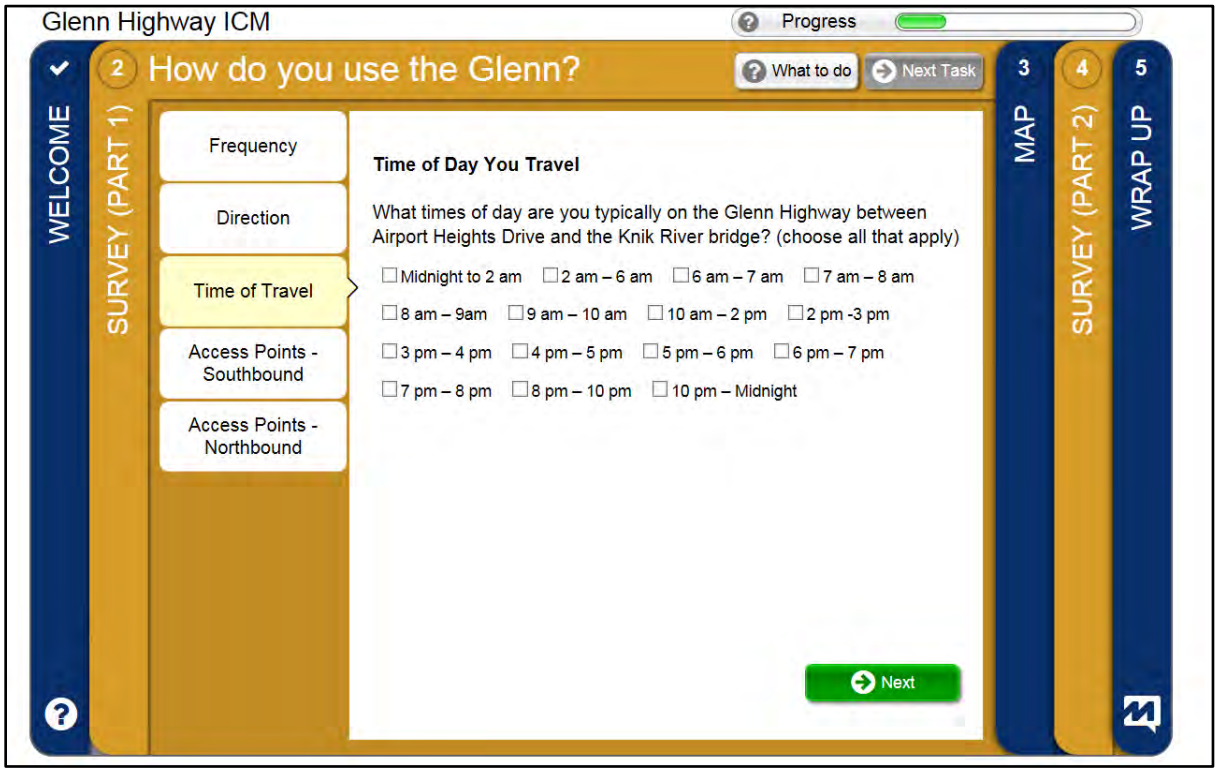

Figure H-4: Survey (Part 1) Time of Day You Travel

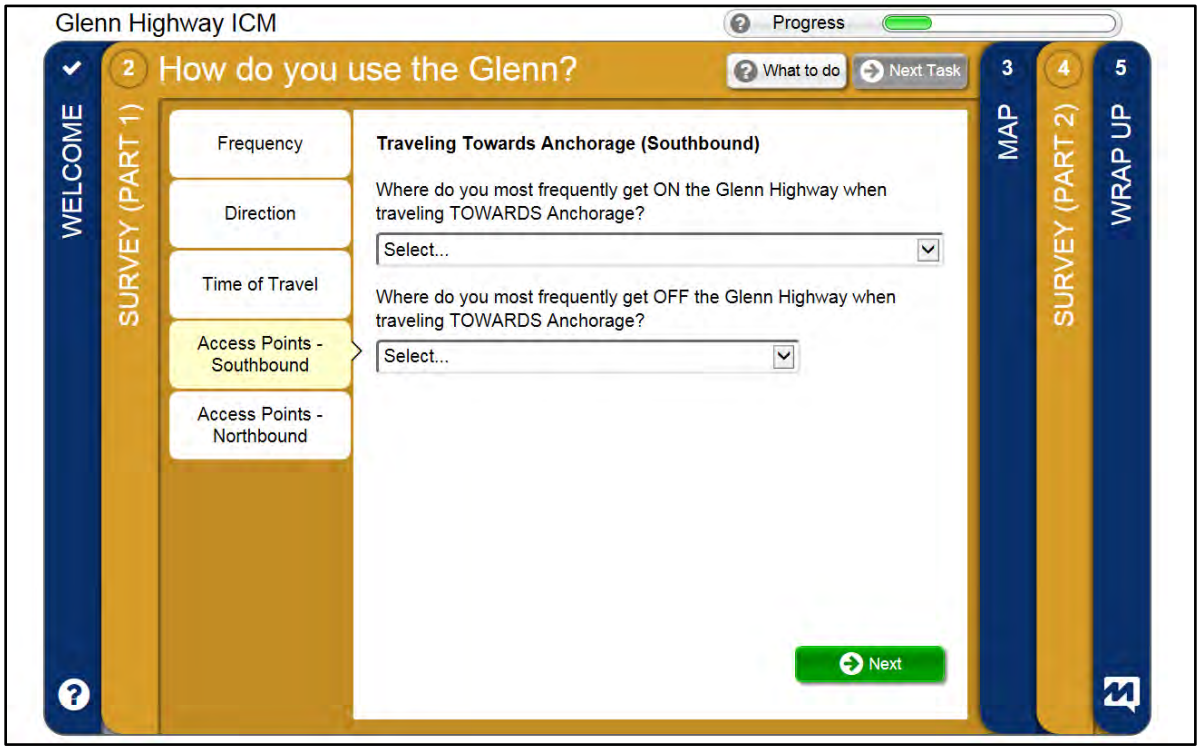

Figure H-5: Survey (Part 1) Southbound Access/ Exit Points

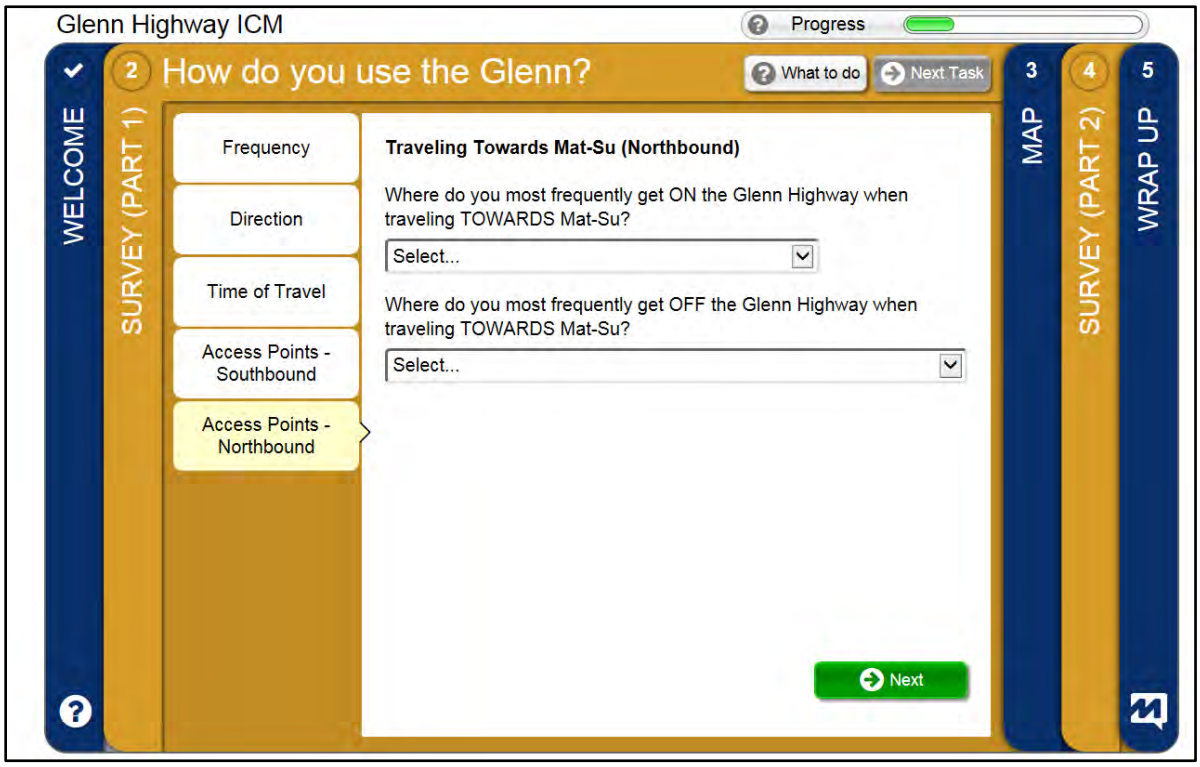

Figure H-6: Survey (Part 1) Northbound Access/ Exit Points

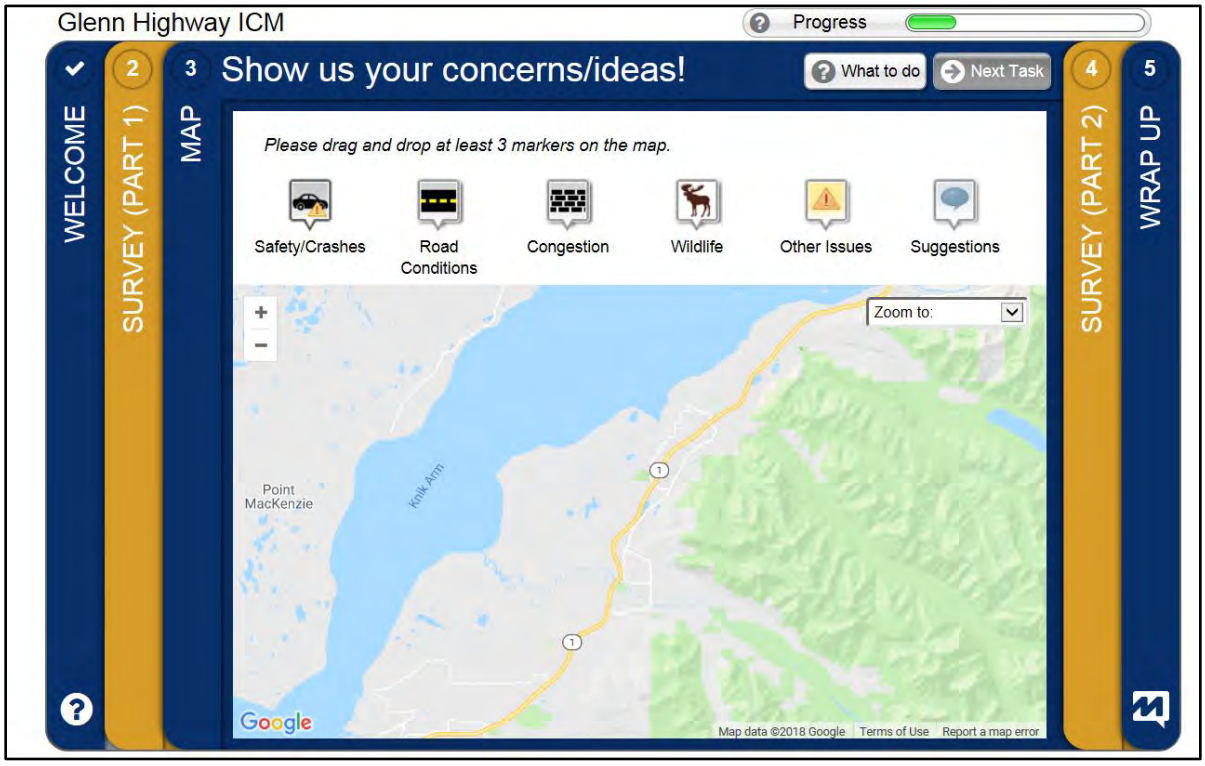

Figure H-7: MetroQuest Survey Map (Screen 3)

Figure H-8: Survey (Part 2) Traffic Reports

Figure H-9: Survey (Part 2) Flexibility

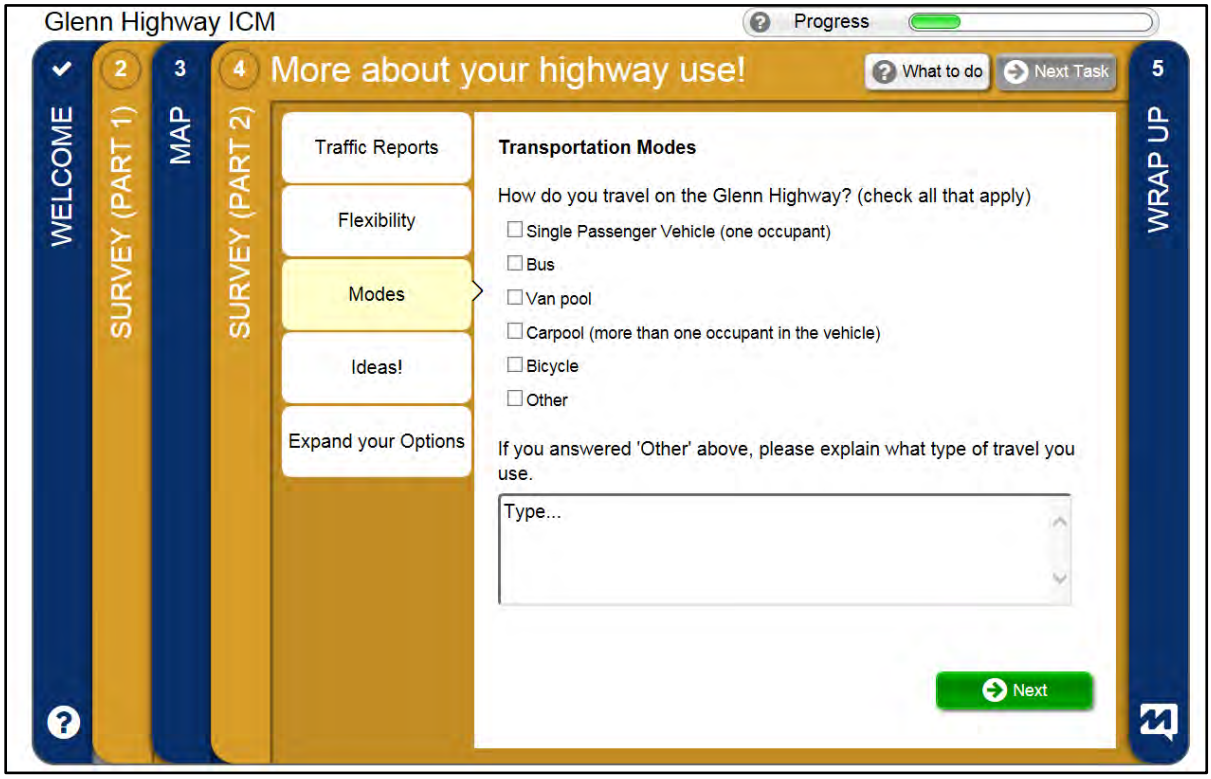

Figure H-10: Survey (Part 2) Transportation Modes

Figure H-11: Survey (Part 2) Ideas

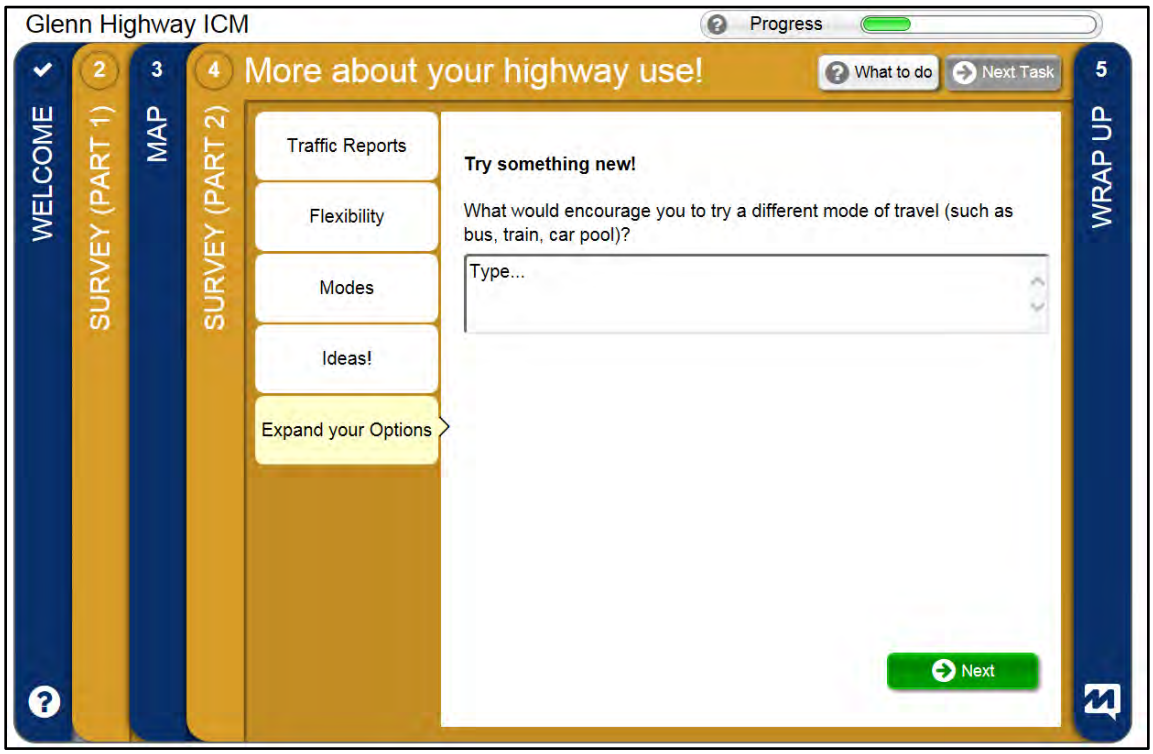

Figure H-12: Survey (Part 2) Expand Mode of Travel

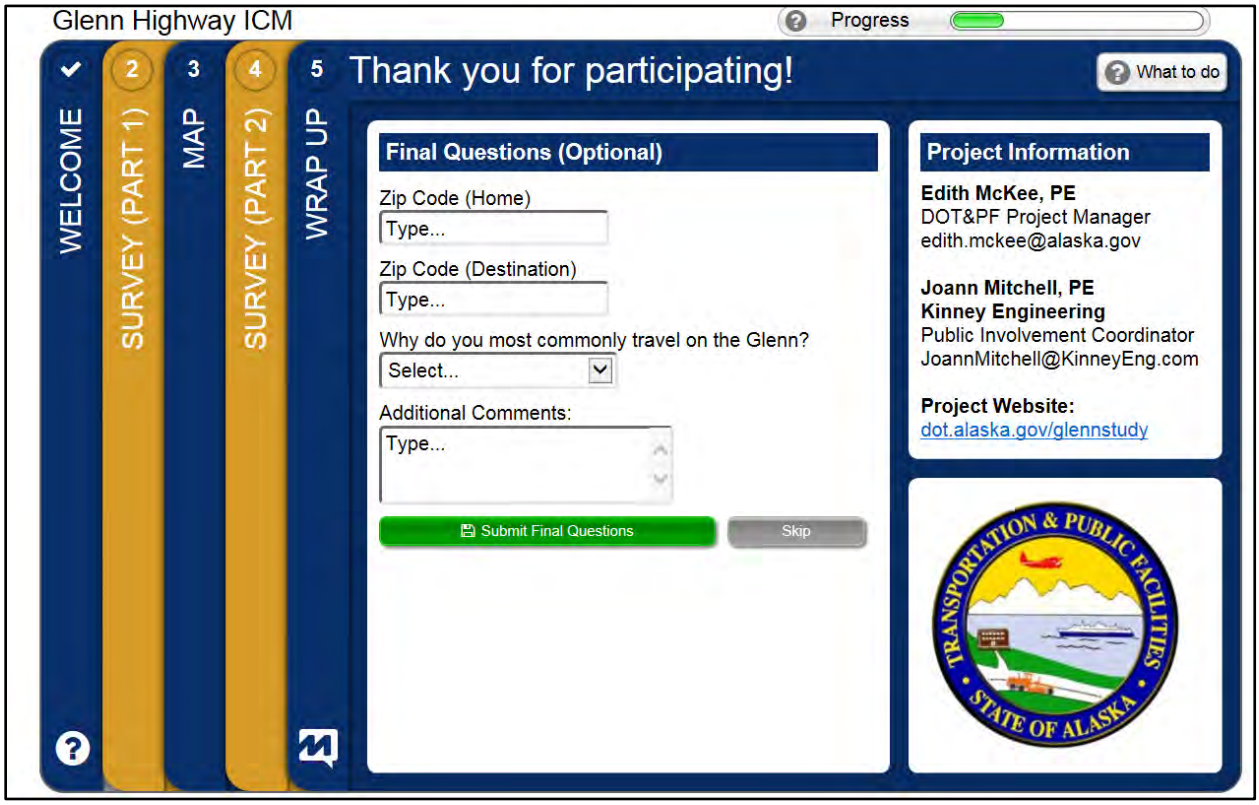

Figure H-13: Survey Wrap Up Screen

Appendix I: MetroQuest KMZ File

See Attached KMZ File

Appendix J: Effects of Bridge Incident on Online Survey Data

The majority of participants completed the survey after the crash event on March 21st, 2018. The crash caused delay and lane closures along the Glenn Highway for a few days. In order to assure that the crash did not result in biased data, survey responses before the event and after the event were compared. Table J-1 demonstrates the number of icon markers that were generated from the public in "hot spot" locations along the Glenn Highway before and after the incident. As shown in this table, the "hot spots" have approximately the same percentage at each location before and after the crash.

Table J-1: Hot Spot Locations along the Glenn Highway

	Locations	Before March 21st		After March 21st	
		Number of Markers		Number of Markers	
North → South	Downtown Anchorage	69	2%	187	2%
	Bragaw/ Boniface/ Airport Heights	300	8%	680	7%
	Muldoon	297	8%	767	7%
	JBER/ Arctic Valley/ S Curves	306	8%	734	7%
	Eagle River	1142	30%	3265	31%
	N. Eagle River	477	12%	1326	13%
	Peters Creek/ Birchwood	359	9%	889	9%
	Eklutna/ Thunderbird	338	9%	907	9%
	Old Glenn Interchange and Eklutna Flats	270	7%	694	7%
	North of the Knik River Bridge	126	3%	408	4%
		Total Number of Markers: 3838		Total Number of Markers: 10433	

There were five icon markers available to place on the map part of the survey. Figure J-1 shows the frequency for each type of map marker that was placed before and after the crash incident on March 21.

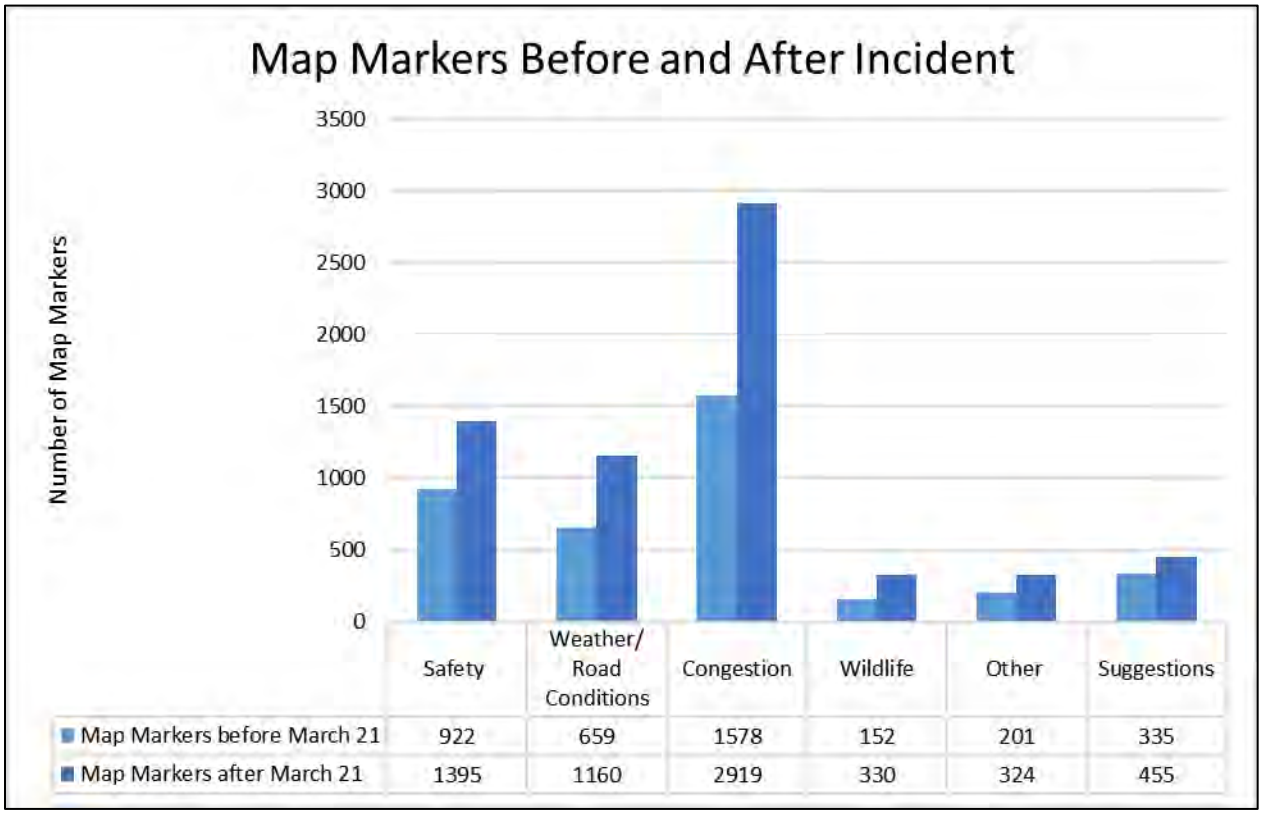

Figure J-1: Map Markers Before and After Crash Incident (March 21st)

Before the crash, 41% of the map markers placed were about congestion, after the crash 44% of icons placed were the congestion icon. Similarly, 9% of icons were suggestions before the crash and 7% were suggestions after the crash. The distribution between the categories stayed relatively the same before and after the incident.

Additionally, the flexibility of users in the morning before and after the crash were compared, as shown in Figure J-2 and Figure J-3, no change in the distribution was observed.

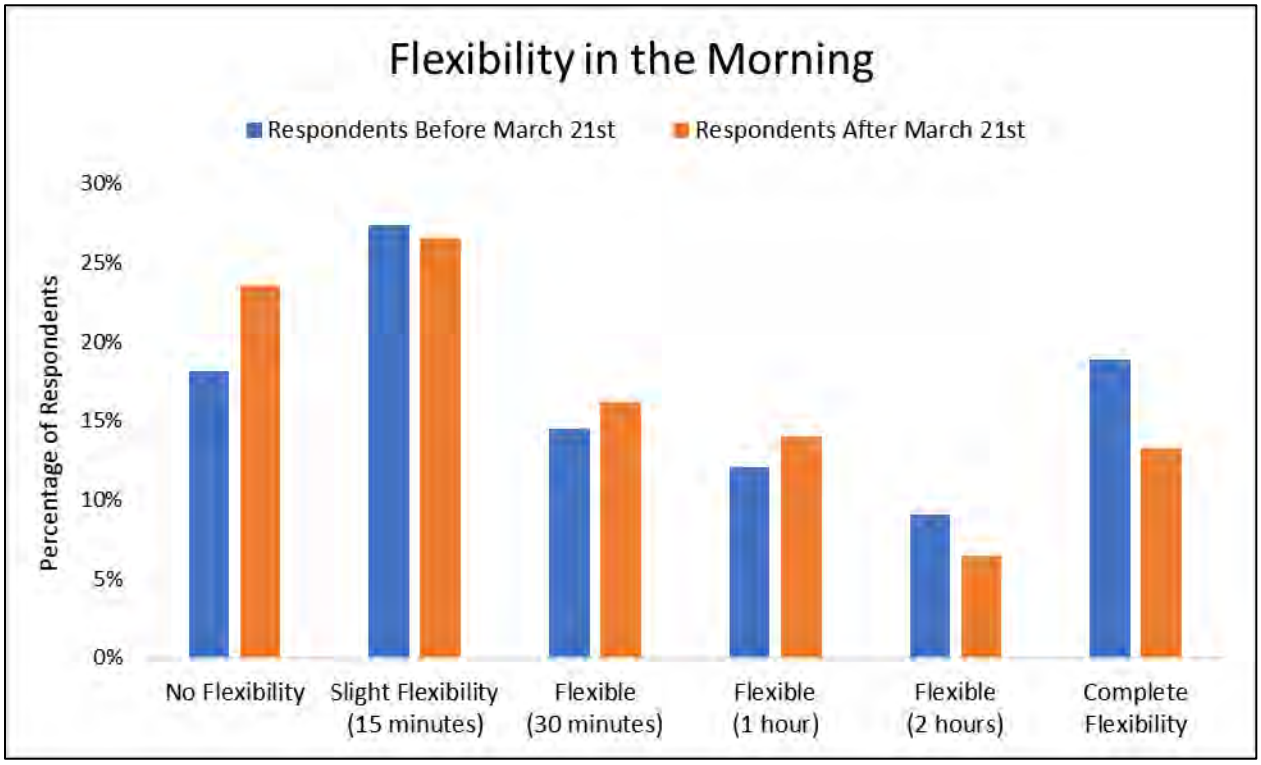

Figure J-2: Flexibility in the Morning Before and After the Crash on March 21st

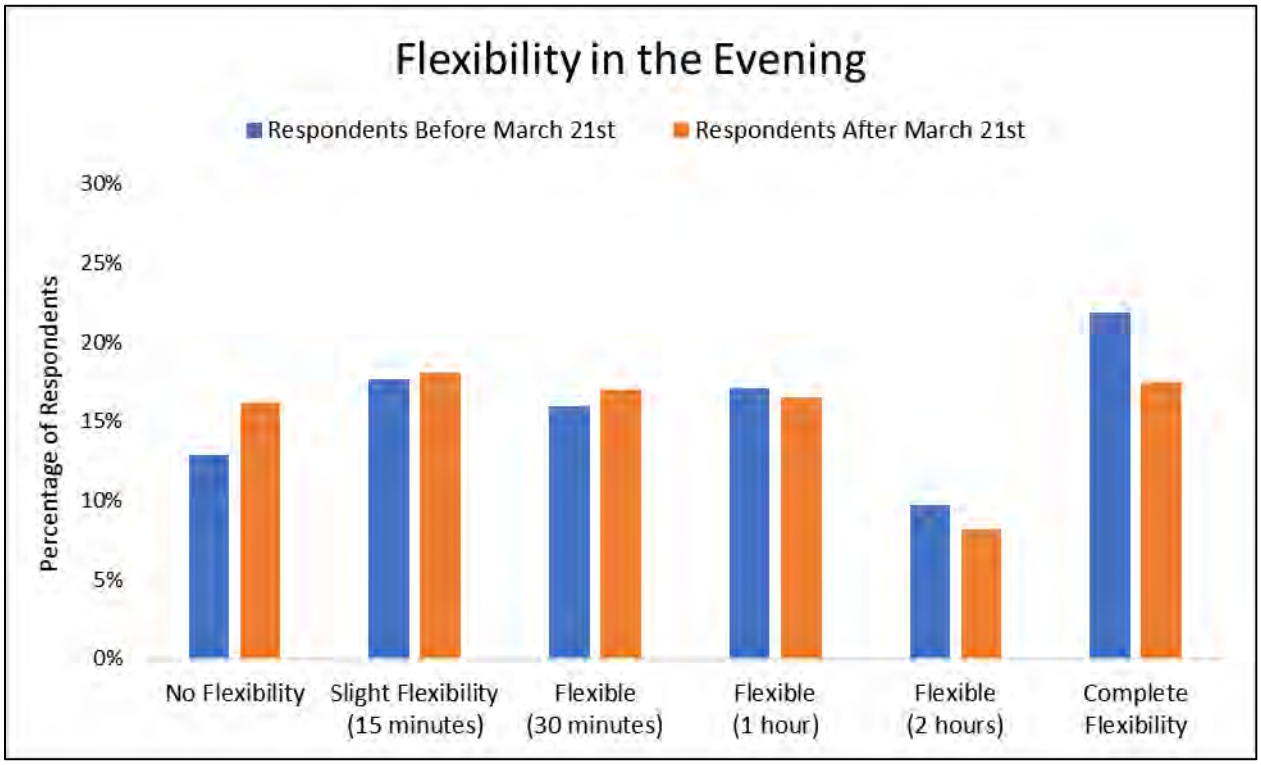

Figure J-3: Flexibility in the Evening Before and After the Crash on March 21st

Finally, KE compared respondent's comments about what would encourage them to choose a difference mode for travel. This also had no change in the distribution, comparing before and after the incident, as shown in Figure J-4.

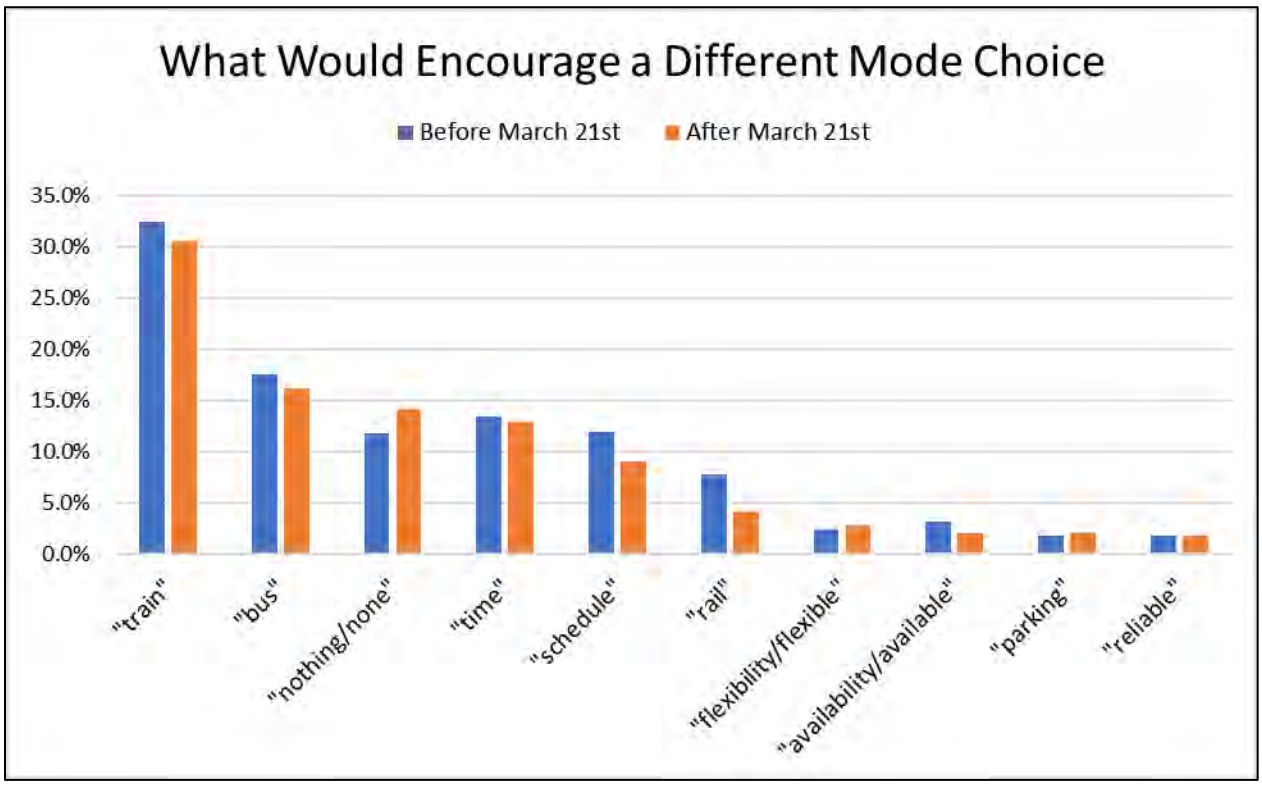

Figure J-4: Public Comments about Changing Mode Choice